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HOMEMAKERS'

Use of and Opinions about FATS AND OILS USED IN COOKING



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This is one of a series of studies made by the Market Surveys Section of the Market Development Branch of the Agricultural Marketing Service, under the direction of Forrest E. Clements, Head of the Section.

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The research on which this report is based was made under authority of the Agricultural Marketing Act of 1946 (RMA, Title II).

This project was begun before the outbreak of hostilities in Korea. By the time interviewing was completed in 1951, there was no longer a surplus of fats and oils. Analysis of the data was postponed until the end of the Korean emergency. However, following the end of fighting and with the reemergence of surpluses of fats and oils, the analysis was resumed and the study carried through to completion. It is published now in the belief that the fats and oils situation today is enough like the situation when the data were collected to make the findings useful in current programs to improve the market for fats and oils and to dispose of accumulated surpluses.

The detailed appendix tables numbered 27 through 208, referred to in the text, and the questionnaire have been published in a separate Supplement to this report, Marketing Research Report No. 67, and may be obtained upon request to the Information Division, Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C.

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Prepared in the Agricultural Marketing Service

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SUMMARY

This is a comprehensive survey of users of fats and oils and indicates the kind and number of fats used, how they were used, and reasons for likes and dislikes in various uses. The information is broken down in a number of ways, including region, rural and urban residence, and the personal characteristics of the homemakers.

The data are of particular value to processors and distributors of edible fats and oils, and will aid them in giving direction to product improvement and in generally meeting the requirements of particular segments of the population. It will assist in marketing these products of agricultural origin which are currently in abundant supply.

The survey was made in 1951, but the nature of the products has not changed materially and reasons for likes and dislikes in usage reported then are likely to persist until processing and distributing industries make changes more nearly to satisfy consumers.

The survey reveals:

Kinds of fats and number of fats used.--Most homemakers in the country--more than 8 in 10--reported that they had used $\frac{1}{2}$ some butter in the previous year. Almost 8 in 10 said they had used vegetable shortening, 6 in 10 had used margarine, 5 in 10 lard, 5 in 10 cooking oils, and $1\frac{1}{2}$ in 10 shortening compound. Very few people said they used only 1 fat or more than 5. Most homemakers used 3--a combination of butter and 2 other fats.

Bacon grease.-- A sizable proportion--8 in 10 homemakers--said they re-used bacon grease for cooking--primarily for seasoning vegetables.

Kinds of cooking done.--Almost every household included in the study said it did some pan frying. More than 9 in 10 homemakers said that they seasoned vegetables with fat, more than 7 in 10 made piecrust or pastry, 7 in 10 made cakes, 6 in 10 cookies, 6 in 10 biscuits, more than 5 in 10 had done some deep-fat frying, more than 4 in 10 made cooked salad dressings or sauces, and almost 3 in 10 made uncooked salad dressing.

Vegetable shortening.--The most popular use of this fat was for pan frying. Piecrust, cakes, and cookies were the next highest kinds of cooking reported (table 1).

Homemakers most often gave as their reason for liking vegetable shortening their experience that the food cooked with it had good texture. The meaning of "good texture" changed with type of cooking but it remained the greatest reported appeal.

Users had few complaints about vegetable shortening. A little more than 1 in 10 said it was too bland for seasoning vegetables.

Half of those who did not use vegetable shortening said it was because they used lard--either they produced their own lard or preferred to use it for some other reason.

Lard.--The most popular usage of this fat was for pan frying followed by piecrust or pastry and biscuits (table 1).

As in the case of vegetable shortening, homemakers who used lard for a specific kind of cooking gave texture of the final cooked product most frequently as a reason for liking to use it.

More than half of the homemakers who used lard for the various kinds of cooking said there was nothing about it that they disliked. Of the specific aspects criticized, texture of product and taste were highest on the list. In this instance texture meant "greasiness."

Homemakers who used lard for some but not for all kinds of cooking, talked a good deal of "habit" --they were accustomed to another fat. This group was more likely to object to the taste and "health" aspects of lard than were those who used it for each kind of cooking.

$\frac{1}{2}$ "Used" includes cooking and spreads. For details see footnote 6 on page 64.

Among nonusers of lard, the most frequently reported reason was a preference for vegetable shortening.

Users of lard were more critical of this product on the subject of taste and smoke than were nonusers.

| | <u>Among users of lard</u> | <u>Among nonusers of lard</u> |
|---|----------------------------|-------------------------------|
| | <i>Percent</i> | <i>Percent</i> |
| Reported a taste dislike for at least one kind of cooking --- | 73 | 46 |
| Reported smoke objections ----- | 50 | 45 |

Shortening compound.--The percentage that said they used this fat for pan frying was almost identical with the percentage of those who used vegetable shortening and lard for this purpose. The next most frequently reported kind of cooking was for piecrust and pastry. Other reported kinds of cooking dropped to less than half of the users (table 1).

The major appeal of shortening compound was similar to that of vegetable shortening. Homemakers liked the texture of the final product. Taste and economy were the next greatest appeals.

Among the few complaints reported by users, those concerning tastelessness were most frequent.

The largest percentage of reasons given for not using shortening compound was expressed in terms of preference for another fat. Vegetable shortening was the most frequently reported competitor.

Cooking oils.--As in the case of vegetable shortening, lard, and shortening compound, the use of this fat most often reported was for pan frying. But in this instance, only 6 in 10 said they used it for this kind of cooking. Cooking oils were used for other kinds of cooking by a third or less of the users (table 1).

The few complaints reported by users clustered around the high cost of oil for cooking.

Although nonusers of oil expressed their objections in several different ways, the principal reason was lack of experience with cooking oil. They were not rejecting oil because of some attribute--they just had not been brought into the market as buyers of oil.

Margarine.--Most users of margarine said they used it for seasoning vegetables. Each of the other kinds of cooking were reported by less than half of the users (table 1). Use as a spread was not included in the study.

For this fat the appeal of texture of final product dropped into a minor position. In its place, at the top of the list, was the appeal of economy--most often mentioned as a comparison with butter. Taste was a high second among appeals.

Complaints about margarine were directed primarily to problems concerned with frying. The homemakers said it burned quickly when used for this kind of cooking.

Most reasons for nonuse were expressed as a preference for something else and were not strong criticisms of margarine.

Butter.--This product, like margarine, had its highest reported use for seasoning vegetables. A little more than half of the homemakers said they used it for pan frying--and the rest of the uses included in the study dropped below half (table 1).

Although the appeal for other fats was founded primarily on appeals of economy or texture of product, users of butter talked most often about taste appeal.

The high cost of butter was the one major criticism reported by users. This criticism appeared for each kind of cooking, varying from 6 to 29 percent.

The overwhelming reason reported by homemakers who didn't use this fat was its high cost. Eighty-five percent reported this.

Discontinued use.--Among nonusers of the various fats who had previously used them, vegetable shortening and shortening compound apparently have lost the bulk of this group in the postwar period. Other fats tended to split into similar size groups for loss in the "previous 1 to 5 years" and the "previous 5 or more years."

| <u>Among previous users of --</u> | <u>Discontinued use in the previous 1 to 5 years</u> |
|-----------------------------------|--|
| | <i>Percent</i> |
| Vegetable shortening ----- | 70 |
| Lard ----- | 42 |
| Shortening compound ----- | 71 |
| Cooking oils ----- | 49 |
| Margarine ----- | 44 |
| Butter ----- | 43 |

Fat used most.--Although no attempt was made to measure the actual quantity of fat used, a few questions were asked for each fat concerning the relative quantity used in each kind of cooking. No more than 2 or 3 fats were used by most of the homemakers who did each kind of cooking.

As to the fat used most for all cooking, the highest percentage of homemakers said they considered vegetable shortening their principal cooking fat. Lard was the choice of the second largest percentage of homemakers.

Fats on hand, size and recency of last purchase.--At the time interviewing took place fairly small percentages of users of the fats and oils had none on hand.

In tabulating inventory-on-hand for the *United States* it was found that 14 percent or fewer of the homemakers who also considered themselves users were without supplies of the different fats. (See table 18 and table 19.)

| <u>Fat</u> | <u>Percentage of users of specific fats who had none on hand --</u> | <u>Percentage of homemakers in the United States who used specific fats who had none on hand --</u> |
|--------------------------|---|---|
| Vegetable shortening --- | 18 | 14 |
| Lard ----- | 17 | 8 |
| Shortening compound ---- | 61 | 10 |
| Cooking oils ----- | 22 | 10 |
| Margarine ----- | 20 | 12 |
| Butter ----- | 17 | 14 |

For each fat the size of the last purchase clustered around certain units:

- 65 percent of users of vegetable shortening bought 3 pounds
- 66 percent of users of lard bought 2 pounds or less
- 70 percent of users of shortening compound bought 3 pounds or more
- 50 percent of users of cooking oils bought 1 pint or less
- 76 percent of users of margarine bought 1 pound
- 65 percent of users of butter bought 1 pound

Time of last purchase varied considerably from fat to fat. Users of butter and margarine were most likely to have made purchases within the previous 7 days. Users of lard also tended toward short intervals between purchases.

Although there were differences among fats as to size and recency of last purchase, homemakers who bought large quantities and homemakers who bought small quantities of the same fat bought at about the same intervals. Apparently people buy larger quantities at a time because they use more--not because they wish to reduce the frequency of shopping for it.

Packaging and containers.--Most users of vegetable shortening said they bought this product in 3-pound metal containers. The few complaints centered around the problem of opening the container and the lack of fit of the lid after opening.

In the year previous to interview, 68 percent of the users of lard bought it packaged, 26 percent used homemade lard, and 4 percent bought bulk lard. Among users of packaged lard the 1-pound size was most popular.

Almost 9 in 10 users of lard bought it in cardboard containers, although they said the boxes were messy to handle.

Most users of cooking oils bought in pint or quart sizes. A small group bought gallon containers--few reported other sizes. Two-thirds bought oil in glass containers, one-third in metal containers. Those who used metal con-

tainers were a little more likely to complain about the containers. Users of both kinds of containers directed their comments to the problems of pouring.

Eighty-one percent of the users of butter bought it packaged; 14 percent used homemade butter; and only 3 percent bought it in bulk.

For all of the fats, homemakers were reasonably well satisfied with the size of containers available to them.

Brand preference and loyalty.--More users of vegetable shortening preferred a certain brand than did users of other fats. Cooking oils were next most closely identified with brand. Users of margarine and users of shortening compound were almost tied in third place. Butter dropped below this pair and users of packaged lard were least interested in brands when they went to buy.

Homemakers who expressed a preference for a particular brand did not have the same degree of loyalty to the brand. For example, 82 percent of the users of vegetable shortening said they had a brand preference, but only 36 percent of this group said they would make an effort to find it if it were not immediately available; and although 41 percent of users of packaged lard expressed a brand preference, only 31 percent were loyal to a particular brand.

Refrigeration.--Users of lard were more likely to keep this fat in a cooled place than were users of other fats. About 7 in 10 homemakers kept lard cool and only a little more than 2 in 10 users of vegetable shortening, shortening compound, and cooking oils did this.

More than half of those who kept lard cool said they would like to be able to leave it at room temperature. Users of other fats were somewhat less interested in noncool storage.

Table 1.--*Summary*: Percentages of homemakers reporting use of different fats in specified kinds of cooking

| Kinds of cooking | Users of -- | | | | | | Total United States |
|--|-----------------------------------|----------------|-----------------------------|-----------------|----------------|----------------|---------------------------|
| | Vege- table short- ening | Lard | Shorten- ing compound | Cooking oils | Marga- rine | Butter | |
| | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> |
| Deep-fat frying --- | 45 | 43 | 43 | 36 | 2 | 2 | 53 |
| Pan frying ----- | 78 | 75 | 77 | 59 | 45 | 55 | 98 |
| Piecrust or pastry- | 65 | 65 | 57 | 15 | 7 | 7 | 72 |
| Cookies ----- | 54 | 26 | 35 | 7 | 41 | 37 | 60 |
| Cakes ----- | 65 | 26 | 39 | 28 | 45 | 46 | 70 |
| Biscuits ----- | 48 | 55 | 43 | 7 | 7 | 7 | 59 |
| Cooked salad dress- ings or sauces -- | 10 | 3 | 5 | 11 | 36 | 39 | 43 |
| Seasoning vege- tables ----- | 8 | 23 | 10 | 21 | 82 | 88 | 94 |
| Number of cases --- | 1,252 | 789 | 270 | 757 | 867 | 1,203 | 1,652 |

INTRODUCTION

Since World War II consumption of fats and oils from domestic agricultural sources for both edible and inedible purposes has not kept pace with the increased supply that resulted from the production pattern built up during the war, except at depressed prices. Thus a surplus of these products has been created.

When this study was planned in 1950, it was expected that the overall domestic production of fats and oils would be at about the same high level as in the previous year. However, though the overall production might be the same, production of lard was expected to climb again, as it had the year before.

In 1950 although it was expected that overall price levels for fats and oils would rise, the price of lard was not expected to keep pace with the prices of other fats and oils. Actually a fall in the price of lard was anticipated because of an increase in production and a decrease in exports.

Apparently in 1949 domestic consumption of lard decreased despite the increase in production and the substantial decline in price. This decrease was offset somewhat by a moderate increase in exports, reflecting increased financing by the former Economic Cooperation Administration and removal of export control.

Because of this situation, several positive measures were needed. These included (1) development of new uses for fats and fat products; (2) expansion of current uses to reduce existing or contemplated surpluses; (3) assembling of as much information as possible about the existing market.

Information collected to help solve problems in item (2) can help direct laboratory research devoted to product improvement. Information collected to fill out the picture of present markets, item (3), will permit us to understand the market better and to be better prepared to meet changes in price, supply, and demand. When this study was planned few data were available concerning any of these three points.

The quality of cooking fats is important from the standpoint of household consumers. And, as the quality of lard varies more than the quality of other cooking fats some think this may have contributed to a belief among consumers that lard is an inferior product. The quality of cooking fats is affected by methods of production, marketing practices, and consumer handling before use.

Lard has not always been a carefully produced or carefully handled product. In the past it often had a strong flavor or odor; it was often grainy; it was frequently rancid because of inadequate refrigeration; it smoked at relatively low temperatures; and it was sold in bulk in open "boats" made of cardboard or in cardboard cartons through which the liquid phase leaked, making the package greasy.

In recent years packers have handled raw fats with greater care. They have refined, deodorized, hydrogenated or added lard flakes, and plasticized lard. This has produced a product that is whiter, blander, freer of odors, better as to texture and higher in smoke point. Antioxidants have been added so that lard now resists rancidity and does not require refrigeration. Some of it is packaged as carefully as other cooking fats. Emulsifiers are sometimes added to improve the action of lard when used in making bakery products.

In recent years homemakers have become accustomed to seeing vegetable shortening on grocery shelves and it is easy to assume that it has always been there. Actually this product didn't become popular or widely used until about 1940. World War II saw a great expansion in this market.

Mixtures of lard and vegetable shortening or beef tallow (fat) and vegetable shortening are sometimes referred to as a shortening compound. Mixtures of animal fats or animal fats and vegetable oils are rapidly gaining in quan-

tity produced. Relatively few companies produce them in comparison to the number that produce lard. The proportions of animal and vegetable fats in these mixtures vary widely.

Lard, vegetable shortening, mixtures of animal fats, mixtures of vegetable shortening and animal fat, and cooking oils are used to a considerable degree for similar purposes, and margarine and butter are used in lesser degree for the same purposes. Therefore, all cooking fats were included in the study because it was felt that the information obtained would benefit the market for all cooking fats and oils. But because of the problems associated with lard, additional questions were asked concerning it. Because it was believed that butter and margarine are used in slightly less volume by most people, fewer questions were devoted to these products.

DESCRIPTION OF THE STUDY

Objective of the study.--The objective of the study reported here was to obtain information that would help in determining ways in which the market for cooking fats and oils of agricultural origin (lard, mixtures of animal fats, mixtures of animal and vegetable fats, vegetable shortening, cooking oils, margarine, and butter) might be expanded and ways in which these products might be improved so that they would be better suited to the demands of household consumers.

The study was designed to obtain information concerning the pattern of consumption of cooking fats by household consumers. The pattern of consumption included the purposes for which these consumers use specific cooking fats, reasons why they use or prefer to use them for these purposes, their objections to various fats, inventories on hand at the time of interview, recency and size of last purchase, usual way of storing and preference for fats that can be kept without refrigeration, the usual kind of container bought and complaints about containers, and some information on home rendering of lard in rural areas. Information was collected from nonusers of each fat as to whether they had ever used it, how long ago they had used it, and why they were not using it at the time the study was made.

Method used.--Information was collected by personal interviews with a cross-section sample of household consumers.

Person interviewed.--An interview was taken in each household which fell into the sample except in those in which meals were never prepared at home. The person eligible for interview was the person in the family who had the main responsibility for buying and preparing food.

If one person in the family bought most or all of the food and another prepared it, the person who had chief responsibility for preparing the food was interviewed. If the person who prepared the meals was a paid cook, the "lady of the house" was interviewed whenever possible.

Areas included.--For this survey data were obtained to represent the entire United States and for two separate regions (1) South and (2) rest of the

country excluding the South. (For definition of region, see Definitions of items, p. 12.)

Sample description.--The universe for this survey was the 43,468,000 private households as enumerated by the United States Census of 1950. A cross-section sample consisting of 2,823 households was drawn. Because of the necessity for differential weighting for region and race, this total number does not appear in the tables as a basis for percentages. In order to provide regional estimates, the South as a whole was oversampled. An oversampling procedure was also used for the nonwhite populations in the South and for the rural North.

When treated separately, all interviews taken for a subgroup are used for that group. When subgroups are added together for total regional figures they are weighted back to their proper proportion within the region. This holds true also when the two regions are added to produce totals for the country as a whole--the oversampled parts are weighted back to their proper United States proportions.

Sample returns.--In survey research the percentage of eligible units interviewed varies from study to study. The variation is a function of the design of the study, the interest the interviewer creates on the part of the respondent, and the resourcefulness of the field staff. Because the staff was well-trained and persistent, this study had a very high rate of returns and, therefore, a very representative sample with a minimum of "nonresponse" bias.

Returns were tabulated by region and by size of place--two factors highly associated with rates of response.

| <u>Area</u> | <u>Percentage of eligible households interviewed</u> |
|---|--|
| All sample points | 92 |
| Metropolitan areas | 88 |
| Northern and western cities of 10,000 or more population in 1950 | 92 |
| Southern cities of 10,000 or more population in 1950 | 94 |
| Northern and western towns of less than 10,000 population in 1950 | 90 |
| Southern towns of less than 10,000 population in 1950 | 95 |
| Open country in the North and West | 91 |
| Open country in the South | 96 |

Date of interviewing.--Interviewing took place all over the country during January and February 1951.

Cross tabulations.--The data were tabulated for total United States, rural, urban, North, South, white, and nonwhite. Within North are tabulations for rural and urban. Within South are tabulations for rural and urban and for white and nonwhite. In addition, for the United States there are three groups for size of family, five groups for age of respondent, three educational levels, three income levels, and two community sizes plus rural.

In instances in which the number of cases was too small for statistical reliability or when a specific crossbreak had no analytical significance, these columns were eliminated from the tables. However, all of the cross-tabulations appear in the rough tabulations and they can be made available to persons who have a special interest in studying them.

Reasons tabulations.--Homemakers who used specific fats were asked why they like to use these fats as well as what they disliked about them. Non-users were asked why they didn't use specific fats. In the tabulations, standard stubs were used for the "reasons for liking" and the "reasons for disliking" tables.

For example, *health* appears as a reason for liking a fat, and in such instances homemakers have said they liked the fat because it is "good for you," "healthy," or "easy to digest." Health also appears as a reason for disliking a fat. In these instances the homemakers have said, "It is not digestible," or "It is not as healthy as _____."

When *refrigeration* appears as a reason for liking, homemakers have said "I like it because it keeps at room temperature." When refrigeration is given as a reason for disliking, it means "It doesn't stay fresh unless it is kept cool."

Smoke as a reason for liking means, "Fat doesn't scorch or smoke," and smoke as a reason for disliking means, "It smokes, burns, or scorches."

Odor as a reason for liking means, "It has a good odor," or "a fresh odor." Odor as a dislike means, "It smells strong, rancid," and so on.

Interpreting the findings.--An exhaustive analysis would be required to satisfy the needs of all readers. Such an analysis would include a two-way view of the sample: (1) Proportion of users of a product within the various segments of the population on which the crossbreaks are based, for example, among South nonwhite, the proportion using each product; and (2) characteristics and size of the market made up of users of a specific product, for example, among users of lard, the proportions rural and urban.

All tables in this report have been presented using the first approach--an analysis of groups. The reader who is interested in the second kind of analysis can recompute the figures in tables that do not involve weights, using the percentages and numbers that appear in each table. Such a recomputation is not possible for tables in which the weighted segments of the sample are used. That is, it is not possible to run percentage of North-South

within the United States, rural-urban within North, rural-urban within South, or white-nonwhite within South for a given group of users unless special tabulations are made in which weights are applied to reduce the oversampled parts.

As a complete set of tabulations would have required about half again as many tables, and because of the great volume of data collected, such an undertaking was not financially possible. Therefore, much of the text is limited to a discussion of data from the viewpoint of "users within the various segments of the population."

Significant differences.--Almost without exception all of the questions were tabulated for United States, rural, urban, white, nonwhite, North, urban North, rural North, South, urban South, rural South, white South, and non-white South. When no mention is made of these tabulations in the text it may be assumed that they were eliminated because (1) there were no significant differences between groups or (2) because the number of cases was too small. As a general rule, groups of less than 50 cases were eliminated as a base for computation of percentages.

A difference between two estimates is regarded as statistically significant if it is as large, or larger, than twice its standard error, and, therefore, unlikely to be the result of only sampling variation. Thus, a statistically significant difference is not necessarily an important difference.

Percentage differences between groups in the sample were tested for significance at the 95-percent level. For example, the difference between two percentages--one based on a sample of 100 and one on a sample of 500--would need to be 11 percent to be considered significant. The difference between percentages based on two samples of 500 and 200 cases, respectively, would need to be about 8 percent; that between groups of 500 and 400 cases would need to be at least 7 percent; and so on.

White-nonwhite differences.--Although a number of the white-nonwhite tabulations showed differences associated with race, these differences may be partly a reflection of differences in income between the groups.

Within the scope of the study it was not possible to compare the usage and opinion patterns of identical income groups within each race in order to separate the income effect from the apparent race differences.

Definitions of items in the cross tabulations.--The following definitions were used:

Urban and rural residence - The definition used was the one adopted for the 1950 Census, "the urban population comprises all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs, towns ^{2/}, and villages; (b) the densely settled urban

^{2/} Except in New England, New York, and Wisconsin, where "towns" are minor civil divisions of counties and are not necessarily densely settled centers like towns in other States.

fringe including both incorporated and unincorporated areas, around cities of 50,000 or more; and (c) unincorporated places of 2,500 inhabitants or more outside of any urban fringe. The remaining population is classified as rural."

White and nonwhite - The group designated as "nonwhite" consists of Negroes, Indians, Japanese, Chinese, and members of other non-white races.

North and South - The South, as defined for this study, includes the following States: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia.

The North is the rest of the country excluding the South.

Income - Gross family ^{3/} income for the year previous to interview was used in the study. Gross income was derived by adding wages and salaries before taxes to other income such as that from pensions, allotments, roomers, rent, bonuses, interest, and in rural areas sale of farm products. If a respondent who lived in the open country said that the family raised most of their food, \$1,000 was added to the gross family income. If a respondent lived in the open country and said that the family raised some food, but bought more than it raised, \$250 was added to the total income. If it raised about half of its food, \$500 was added. The total incomes thus obtained were arrayed from lowest to highest and the families were divided approximately into thirds--lower, middle, and upper.

| <u>Income group</u> | <u>Range</u> |
|---------------------|-------------------|
| Lower | Up to \$2,780 |
| Middle | \$2,781 - \$4,540 |
| Upper | \$4,541 and above |

Education - "None or grammar school" includes some grammar school plus those who finished grammar school; "high school" includes some high school plus some who finished high school; and "college" includes both those who attended and those who were graduated from college.

Size of place - "Metropolitan" consists of cities of 500,000 and over. "Townships" include cities and towns of less than 500,000, and "Rural" is composed of the open-country segments.

Definitions used by interviewers.--The list of definitions provided each interviewer included descriptions of the various kinds of fats, the kinds of cooking, and special words unique to the study. The following partial list contains the more important terms with which interviewers were expected to be familiar.

^{3/} The family is defined as all persons related by blood, marriage, or adoption living in a single dwelling unit. Under this definition all roomers, servants, and other nonrelated individuals are not considered in computing income.

Cooking oils - For this survey the term, cooking oils, includes the vegetable oils--cottonseed, soya bean, corn, peanut, and olive oil. The term does not include mineral oil.

Lard - The rendered fat of hogs, sometimes referred to as "pure lard," "hog lard," "leaf lard," "open-kettle-rendered lard," "prime steam lard."

Margarine - A food product usually made from vegetable oils and milk, although animal fats may be included. It may be white or colored yellow.

Mixtures of animal fats and vegetable shortening - See "Shortening Compound."

Rendering lard - This essentially a process of reducing the solid fat from the animal carcass (hogs) to a pure liquid form with the tissue and moisture removed. The practice of rendering lard at home is common in areas in which hogs are produced and slaughtered on the farm for home use.

In rendering the lard, the fat from the carcass, (leaf fat, back fat, fat trimmings) is put into a container, usually a kettle of some kind, for melting. The fat is then cooked until the moisture has escaped and until the tissue has turned brown and come to the top of the kettle. After this the lard is strained and poured into containers for storage. The cooled lard looks very much like commercial lard and shortening.

If lard is properly rendered and is stored under proper conditions, it will keep for a long time without becoming rancid. In many cases it provides a year's supply for the producer.

Seasoning (flavoring) - For purposes of this study "seasoning" refers to the addition of fat to vegetables after they are cooked.

Shortening compound- Mixtures of animal fats and vegetable oils--any shortening product that combines animal fats, such as lard, tallow, or oleo oil, or one that combines one or more animal fats with vegetable oils.

Smoke or smoke point - Refers to the temperature at which the fat starts to smoke. For example, butter will begin to smoke at a lower temperature than vegetable shortening. Some lard smokes at relatively low temperatures. However, lard can be processed so that it has a relatively high smoke point.

Vegetable shortening - Any shortening product which is made wholly from one or more of the various edible vegetable oils. The most common vegetable shortenings in this country are made of refined and hydrogenated soybean and cottonseed oils.

SURVEY FINDINGS

Kinds of Fats Used

In order to screen respondents for the detailed questions to be asked, they were first asked which of six fats they had used in the year previous to interview. Respondents were not asked to estimate the total quantity used during the year by means of "recall." They were only asked whether they had used vegetable shortening, lard, mixtures of vegetable shortening and animal fats, cooking oils, margarine, and butter. They were also asked a few questions as to the use of bacon grease in cooking and the use of fats other than those included in the study.

During the pretest it was discovered that some homemakers confused vegetable shortening and shortening compound, that is, mixtures of animal fats and vegetable shortening. This occurred occasionally when the respondent had not heard of such mixtures before the time of the interview.

In order to have some assurance that the respondents who said they used vegetable shortening were actually using vegetable shortening and not a shortening compound, brand names were asked 4/ for both of these products. The interviewer checked the reported names against a master list which was part of the field kit. To avoid a situation in which the respondent spoke of a brand name with which the interviewer was not familiar, the interviewer was instructed to visit a few stores before she started interviewing to acquaint herself with the national and local brands sold in her area. If she found names that did not appear on her list she was to read the label carefully to ascertain whether the product was a vegetable shortening or a shortening compound and to write in these new names on her list.

For the country as a whole the highest proportion of families reported the use of butter. Vegetable shortening was used by the second highest proportion, margarine was third, and lard and cooking oils were fourth. This is not a measure of quantity consumed--it is simply a measure of the proportion of families reporting some use of the product during a year's time (fig. 1).

Analyzing the findings by region, urban-rural residence, and race (in the South) it is apparent that the highest proportion of users of vegetable shortening is found in the urban North, and the smallest proportion among the nonwhite population in the South. Lard has its highest use in the nonwhite South and its lowest in the urban North. In the nonwhite South shortening compound shows up highest and in the urban North it is lowest. Cooking oils show their highest proportion of users in the urban North and their lowest in the nonwhite South. Margarine runs highest in the urban South and lowest in the urban North. Butter has its greatest coverage in the urban North and least in the urban South.

4/ The Agricultural Marketing Service does not publish findings for particular brands. Although brand names were actually asked and recorded they were used only as a check against possible confusion of products and were never coded or tabulated.

PERCENTAGE OF FAMILIES REPORTING USE OF SPECIFIC FATS

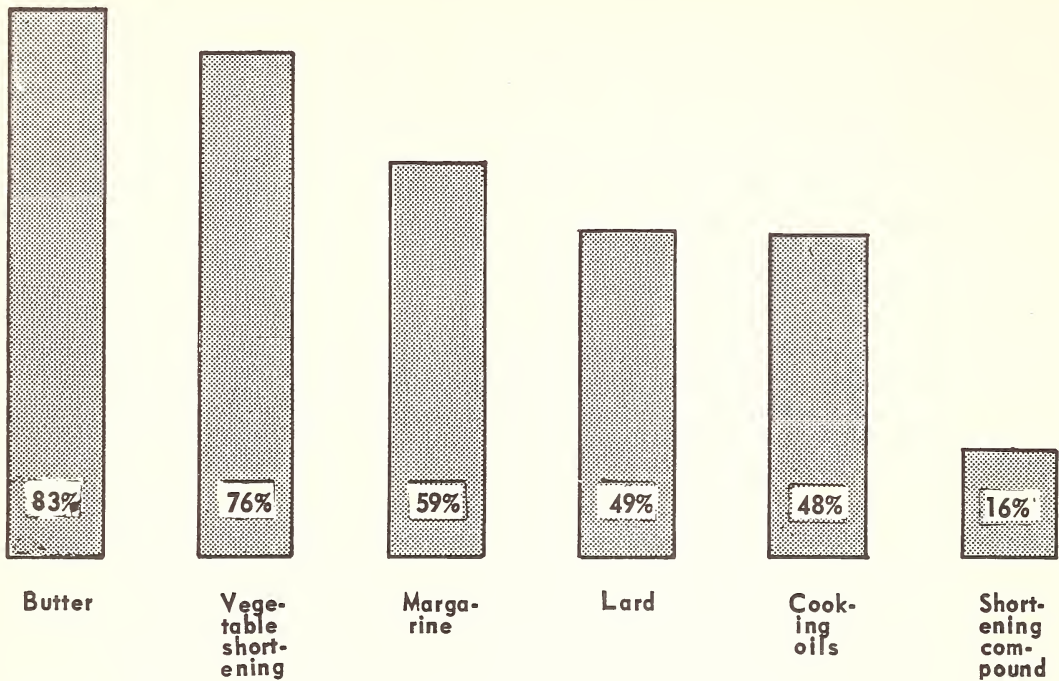


Figure 1

| Product | Highest proportion of users was among the | | Lowest proportion of users was among the | |
|----------------------|---|---------|--|---------|
| | Area | Percent | Area | Percent |
| Vegetable shortening | North urban | 84 | South nonwhite | 47 |
| Lard | South nonwhite | 78 | North urban | 39 |
| Shortening compound | South nonwhite | 28 | North urban | 15 |
| Cooking oils | North urban | 59 | South nonwhite | 18 |
| Margarine | South urban | 78 | North urban | 52 |
| Butter | North urban | 88 | South urban | 71 |

In all 3 educational groups more than 4 in 5 families said they used butter. In the lowest educational group about 3 in 5 used vegetable shortening and a group of equal size used lard. Among the middle educational group at least 3 in 5 used margarine and 4 in 5 used vegetable shortening. Among families with a homemaker who had attended or graduated from college, more than 3 in 5 used margarine and $4\frac{1}{2}$ in 5 used vegetable shortening.

If the percentage of families using a product may be considered a measure of its popularity, some idea can be obtained of the educational segments

of the population for whom these products have the greatest appeal or in which they are most popular. But the size of each segment should be remembered in evaluating the success of product penetration. For example, even though lard had a higher proportion of users among grade-school families, and a smaller proportion of users among high-school families, actually it had the *greatest* number of customers in the high-school group because there are more families in this educational group than in either of the other two (table 27).

| <u>Product</u> | Highest Proportion of users was among those who -- | | Largest Number of users was among those who -- |
|----------------------|--|----------------|--|
| | <i>Attended</i> | <i>Percent</i> | <i>Attended</i> |
| Vegetable shortening | College | 89 | High school |
| Lard | None or grammar school | 57 | High school |
| Shortening compound | College | 22 | High school |
| Cooking oils | College | 67 | High school |
| Margarine | College | 66 | High school |
| Butter | College | 86 | High school |

Producers or distributors who are concerned with expanding their market outlets will find this information helpful in making decisions regarding the groups to which they will want to make promotion appeals. They know that among those who attended grade school 57 percent used lard, among those who attended high school 47 percent user users of lard, and among the college group only 34 percent used it. Statistically significant differences occur among the groups. How shall a producer decide on the direction of market expansion? Shall be direct promotion to the group that has the smallest proportion of users because this provides the largest proportion of nonusers who might be converted? Shall he devote his efforts to the middle group who attended high school because they provide the greatest number of nonusers to work with? Should he turn his efforts to the market of greatest saturation--the grade-school group--because its members are already oriented toward the product and it is just a question of tempting an already susceptible group into further use?

Answers to these questions are not easy. They must be based on a combination of data such as that provided in this report, plus general knowledge of the cost of bringing a promotion campaign to the various kinds of groups and a general knowledge of the expected success of promotion directed to each group.

Looking at the percentage of users of the various fats within the three income groups, one finds that butter is used by a larger proportion of each group than any other fat. Again the reader is reminded that this does not mean that homemakers used a greater quantity of butter than of other fats--only that a higher proportion used some butter in the previous year.

Vegetable shortening is most popular among the high-income group; lard among the low-income; cooking oils among the high-income; and margarine among the low-income families. Shortening compounds were used by equally small percentages of all income groups.

For each fat except butter, the group within which the fats was most "popular" was also the largest market so far as size was concerned. For example, lard was most popular among the low-income group. It also had its largest market in that group.

| <u>Product</u> | <u>Highest proportion of users was among the</u> | |
|----------------------------|--|----------------|
| | <i>Income group</i> | <i>Percent</i> |
| Vegetable shortening ----- | High | 86 |
| Lard ----- | Low | 61 |
| Shortening compound ----- | High | 19 |
| Cooking oils ----- | High | 60 |
| Margarine ----- | Low | 63 |
| Butter ----- | High | 89 |

As concentration of population rises from rural to township to metropolitan areas, the percentages reporting use of the various fats change. Among the urban population, vegetable shortening has its greatest popularity; in the rural areas lard is most popular; shortening compounds are used by a small proportion in all areas; metropolitan areas show a higher percentage of users of oils than do small places; townships show the highest percentage of users of margarine; and metropolitan areas are highest for butter.

For analysis by family size, the respondents' families were grouped according to those who had 1 or 2 members, those having 3 or 4, and those with 5 or more. The larger families showed a higher proportion of users of lard, shortening compound, and margarine than the other groups, and the medium-sized families showed the highest proportion of users of vegetable shortening, oils, and butter. Butter, however, was used by almost identical proportions within each group. Small families had the lowest proportion of users of each of the fats.

| <u>Product</u> | <u>Highest proportion of users was among the</u> | |
|----------------------------|--|----------------|
| | <i>Families of</i> | <i>Percent</i> |
| Vegetable shortening ----- | 3 or 4 | 80 |
| Lard ----- | 5 or more | 60 |
| Shortening compound ----- | 5 or more | 23 |
| Cooking oils ----- | 3 or 4 | 54 |
| Margarine ----- | 5 or more | 67 |
| Butter ----- | 3 or 4 | 85 |

Percentage of use varied somewhat in the different groups. Vegetable shortening was most popular in the 40 to 49 year group; lard among those 50 and over; shortening compound among those 25 to 29 years of age, cooking oils

in the 30 to 39 year group; and margarine among those 25 to 29. Butter was almost equally popular in all age groups.

| <u>Product</u> | <u>Highest proportion of users was among those</u> | |
|----------------------------|--|----------------|
| | <i>Aged</i> | <i>Percent</i> |
| Vegetable shortening ----- | 40 to 49 years | 81 |
| Lard ----- | 50 and over | 51 |
| Shortening compound ----- | 25 to 29 | 24 |
| Cooking oils ----- | 30 to 39 | 56 |
| Margarine ----- | 25 to 29 | 67 |
| Butter ----- | 24 or less | 85 |

The greatest differences among age groups was in the use of cooking oils. Among the younger homemakers--those under 40--53 percent reported the use of these oils. Among the older group--those 40 or more--42 percent reported their use. Margarine also tends toward a higher proportion of users in the younger group (table 27).

At the time this study was in the field, producers of cooking oils were undertaking a promotion campaign which involved the usual media plus considerable billboard advertising. The appeals used in the campaign emphasized the use of oils in specific new baking recipes. The differences among the age groups may have been a reflection of the greater willingness of younger homemakers to try new ways of cooking.

In summary, the personal characteristics of the groups having the highest proportion of users of the various fats was as follows:

| <u>Product</u> | <u>Highest proportion of users --</u> | | | | | |
|-----------------------|---------------------------------------|----------------------|---------------|----------------------|--------------------------|--------------------------|
| | <i>Region</i> | <i>Education</i> | <i>Income</i> | <i>Size of place</i> | <i>Age of respondent</i> | <i>Persons in family</i> |
| Vegetable shortening | North urban | College | High | Metropolitan areas | 40 to 49 | 3 or 4 |
| Lard ----- | South nonwhite | None or grade school | Low | Rural | 50 and over | 5 or more |
| Shortening compounds- | South nonwhite | College | High | Townships | 25 to 29 | 5 or more |
| Cooking oils | North urban | College | High | Metropolitan areas | 30 to 39 | 3 or 4 |
| Margarine -- | South urban | College | Low | Townships | 25 to 29 | 5 or more |
| Butter ----- | North urban | College | High | Metropolitan areas | 24 or less | 3 or 4 |

Number of Fats Used

For the country as a whole, very few people reported using only 1 fat or more than 5 in the year previous to interview. The largest group, more than 3 in 10, said they used 3 different fats; almost 3 in 10 said they used 4; more than 2 in 10 said they used only 2; and more than 1 in 10 said they used as many as 5 different fats (fig. 2).

PERCENTAGE OF FAMILIES REPORTING NUMBER OF FATS USED

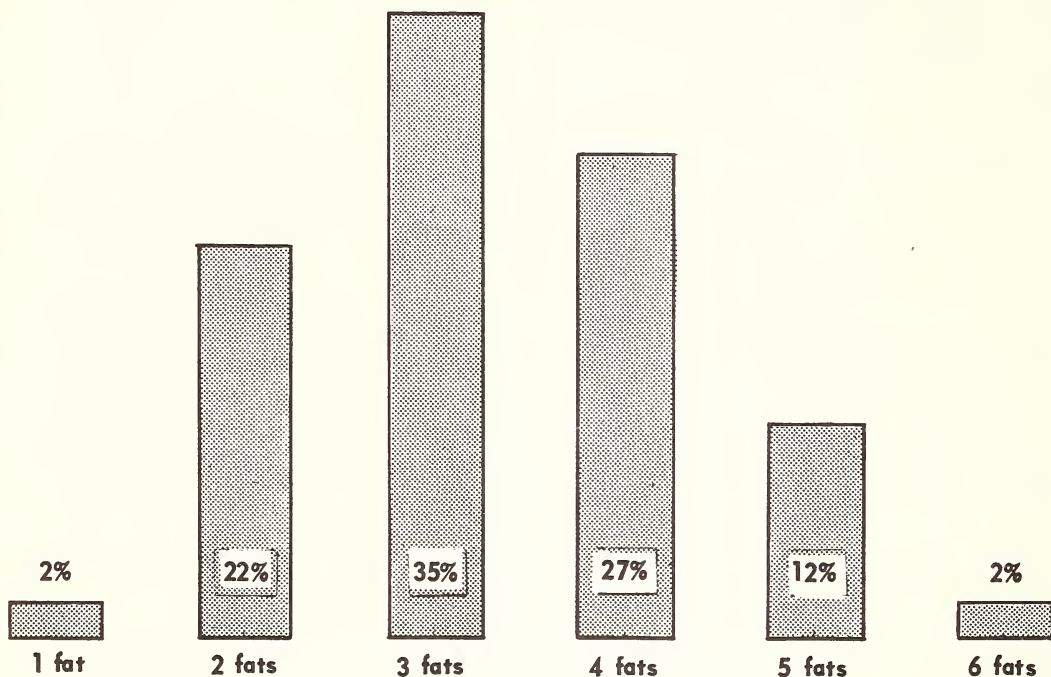


Figure 2

In general, the regions and the rural-urban tabulations showed the same percentage distribution, with 3 fats as the modal group. There was some shift in the South toward use of a fewer number of fats.

Among each of the educational and each of the income groups 3 fats was the modal group. However, the higher educated and the higher income families showed higher proportions using 4 or more fats. Urban people used a slightly greater number of fats. On the whole, women who were 50 and over used fewer fats while those from 25 to 39 used the greatest number.

The number of fats used would appear to be a direct reflection of personal characteristics. Income and education are, of course, highly related and it is not surprising that they influence level of use in the same direction. Urban people also tend toward higher incomes and they also show a higher number of fats used. There is an additional relationship between size of family and age of homemaker. Homemakers in their middle years have their families at home and do more cooking. As a result they use a greater number of fats than do older homemakers and those with small families (table 28).

Number of fats used by lard users.--Separate tabulations were made for the half of the homemakers who said they used lard. Almost 2 in 10 of these users said they used lard and one other fat, about 6 in 10 used two or three other fats, and more than 2 in 10 used four or five others.

All the tabulations of the regional and personal characteristics of the homemakers showed differences. The urban population tended to use a greater number of fats in addition to lard--as did the white population in comparison with the nonwhite. As education went up the median number of fats increased. As income increased so did the number of fats used. Larger families used a greater number than did smaller ones and younger women used a greater number than those in the 50-year and older group.

In only a few isolated cases in the rural South were there families using lard and no other fat (table 29).

Number of other fats used.--After the respondents were asked whether they had used the six fats included in the study, they were also asked, "Can you think of any other fats you have used in the last year?" A fairly small proportion had used additional fats.

16 percent said they *did* use other fats
13 percent said they used 1 other fat
3 percent said they used 2 other fats
84 percent said they *did not* use other fats.

Most homemakers who used other fats used chicken fat or fat from pork. Use of chicken fat was considerably more popular in the North and among whites than in the South and among nonwhites. Use of pork fat was reported by a higher proportion in the South than in the North. But within the North there was greater emphasis on this fat in urban than in rural areas. There was no significance in the rural-urban differences within the South in use of pork fat (table 30).

A review of the tabulations of uses of other fats according to personal characteristics showed no significant differences for region, race, rural-urban residence, education, income, size of place, size of family, or age of homemaker.

Bacon grease used.--In the United States a sizable proportion--8 in 10 homemakers--said they used bacon grease for cooking. Most of them said they used it in one or two kinds of cooking.

Rural homemakers were more likely to reuse bacon grease than were urban ones. Eighty-six percent of the rural homemakers said they reused this fat but only 76 percent of the urban homemakers did so.

A higher proportion of southern homemakers reported this habit than did northern ones--89 percent in the South and 76 percent in the North. There was also a white-nonwhite difference. Ninety-one percent of the nonwhites and 78 percent of the whites said they reused bacon grease.

Homemakers with larger families tended more to reuse bacon grease than did those with smaller families and women in the 25-to-29 year age group were more likely to do so than those over 50 (table 31).

The most popular single use to which bacon grease was put was seasoning vegetables. Almost half reported this use. Next came frying of various foods, particularly potatoes, and last came a group of 11 percent who said they used it in baking. ^{5/}

Use of bacon grease for seasoning vegetables was more rural than urban, more nonwhite than white, and more southern than northern. When differences occurred in the use of this fat for frying, they tended toward higher proportions in urban areas, among whites, and in the North.

Use of bacon grease for baking was more heavily reported in the South than in the North (table 32).

Most of those who reused bacon grease used it for two kinds of cooking. Table 33 shows percentages for the United States, as follows:

27 percent used it for 1 kind of cooking
34 percent used it for 2 kinds of cooking
15 percent used it for 3 kinds of cooking
3 percent used it for 4 or more kinds of cooking

21 percent do not use it for cooking.

Kinds of Cooking Done with Different Fats

The first questions, those concerning specific fats used in the last year, were asked without relating them to kinds of cooking. The next set of questions, which concerned the kinds of cooking done, were asked without relating the cooking to kinds of fats used. These questions were asked in this way for two reasons--to get the respondent to begin to think about the items to be discussed in detail later, and to give the interviewer guides so that only appropriate questions would be asked a homemaker who did not use all the fats and did not do all kinds of cooking (fig. 3).

Because the primary focus of this study is a review of the kinds of fats related to their use, a detailed discussion of the cooking itself is not included here. However, Appendix table 34 shows kinds of cooking by background characteristics.

Making bread and rolls.--While this study was being planned some members of the advisory committee expressed particular interest in the subject of home baking of bread and rolls. Information was desired on the percentage of homemakers who baked, how often they baked, and whether they had been doing more or less in the last year or so. They were asked, "In the last year did you make any BREAD, not from the prepared mix but the regular kind made with yeast?" The same question form was used for rolls.

^{5/} Baking includes bread, cake, cookies, piecrust, cornbread, and so on.

PERCENTAGE OF FAMILIES REPORTING KINDS OF COOKING DONE WITH FATS

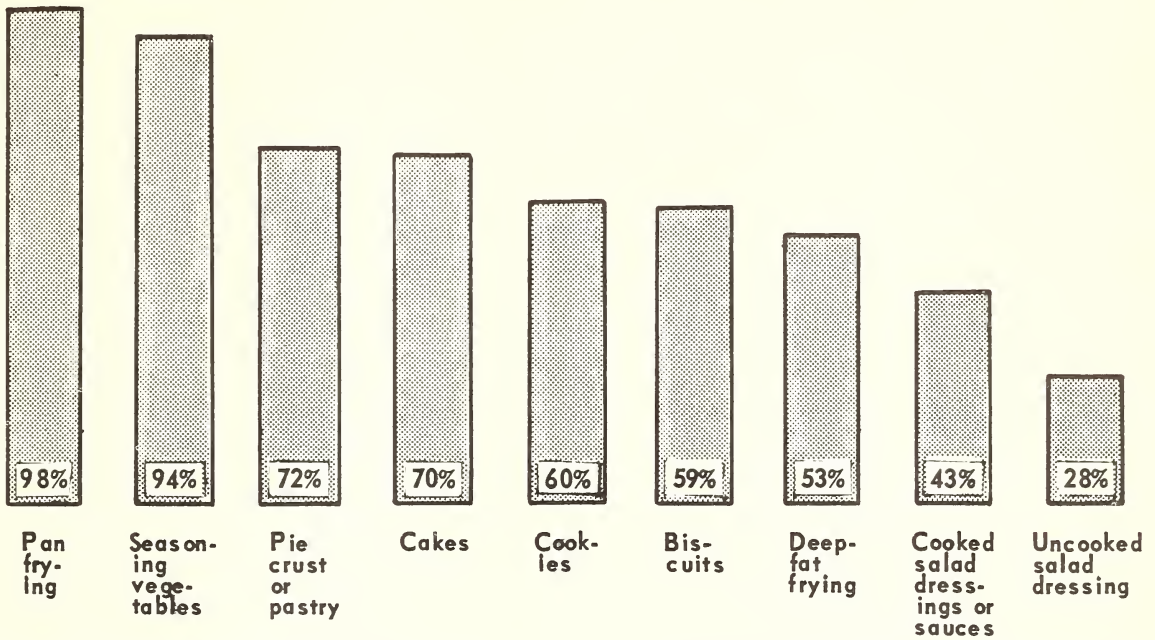


Figure 3

Survey results showed that 23 percent of the homemakers had made bread in the year previous to interview and that 30 percent had made rolls. These were regular bread and rolls made with yeast, not the prepared kind.

A higher proportion of bread baking was reported in the rural than in the urban areas of the country. Larger families were more likely to have baked bread than smaller ones as were those in the North in comparison with those in the South. There was little difference between white and nonwhite, educational groups, or income groups.

Rolls, which were baked by a slightly larger proportion of the homemakers than bread, were made by a heavier proportion in rural areas. Differences between North and South and white and nonwhite were not significant.

The other personal characteristics did reveal differences so far as rolls were concerned. Those who had attended college and the middle and upper income groups were more likely to have baked rolls. Larger families also showed a higher proportion of roll baking than smaller ones.

Although there were no significant differences among the various age groups in regard to bread baking, a slight trend appeared when it came to making rolls. The proportion reporting such baking was higher among those in the middle age groups than among those who were younger or older (tables 35 to 36).

On the average, bread was baked a little more frequently than rolls. Those who baked rolls averaged 28 times a year--bread was baked an average of 34 times.

| <u>Percentage who baked bread</u> | <u>Percentage who baked rolls</u> | |
|---------------------------------------|---------------------------------------|------------------------|
| 23 | 16 | 1 to 3 times a year |
| 14 | 16 | 4 to 10 times a year |
| 29 | 38 | 11 to 48 times a year |
| 28 | 27 | 52 to 365 times a year |

The frequencies for those who baked bread clustered around 2 or 3 times a year, every 2 to 4 weeks, and once a week. The clusterings for those who baked rolls was around two points, every 2 to 4 weeks and every week (table 37).

When bread and rolls are treated as one, it will be seen that the highest proportion of homemakers baking either is in the rural North, where more than half said they did so. The smallest amount of such baking was done in the rural South where less than a fourth said they did this kind of baking.

| <u>In the:</u> | <u>Percentage who baked bread and rolls</u> |
|----------------|---|
| United States | 35 |
| Rural | 39 |
| Urban | 33 |
| White | 35 |
| Nonwhite | 31 |
| North | 37 |
| Rural | 54 |
| Urban | 32 |
| South | 28 |
| Rural | 20 |
| Urban | 35 |
| White | 28 |
| Nonwhite | 25 |

Those who had baked either bread or rolls in the last year were asked, "Compared with the year before would you say that in the last year you baked bread (and/or rolls) more often, less often, or about the same?"

In the United States about a fourth of those who had done this kind of baking said they were baking more often, almost a fourth said they were baking less often, and more than half said their baking had remained about the same. Therefore, unless those who increased or those who decreased such baking changed at considerably different rates, the overall picture of home baking of bread and rolls remained about the same in the year or two before interviewing took place.

The same general picture of trends in baking held for rural and urban, and white and nonwhite. In the South such baking increased slightly less than in the rest of the country.

There were no significant differences among the educational or income groups. Families of 3 to 4 persons indicated a slightly greater increase in baking than did either smaller or larger families. Among the very young homemakers, those 24 years old and less, frequency of baking increased significantly.

Although the percentage differences in the tables on education and income appear to be sizable, the differences are not statistically significant because of the small number of cases in each group (table 38).

Vegetable Shortening

Kinds of cooking in which used.--After the general questions were asked to ascertain the fats each homemaker used and the kinds of cooking she did--a series of detailed questions were asked about each fat, relating it to specific kinds of cooking and the likes and dislikes reported for each use.

Of the large group of users of vegetable shortening, more than half said they used it for pan frying; also for piecrust or pastry; for cookies; and for cakes. Slightly less than half used it for deep-fat frying or for biscuits; and very small percentages said they used it for seasoning vegetables or for cooked salad dressings or sauces (fig. 4).

AMONG USERS OF VEGETABLE SHORTENING, PERCENTAGES WHO SAID
THEY USED IT FOR DIFFERENT KINDS OF COOKING

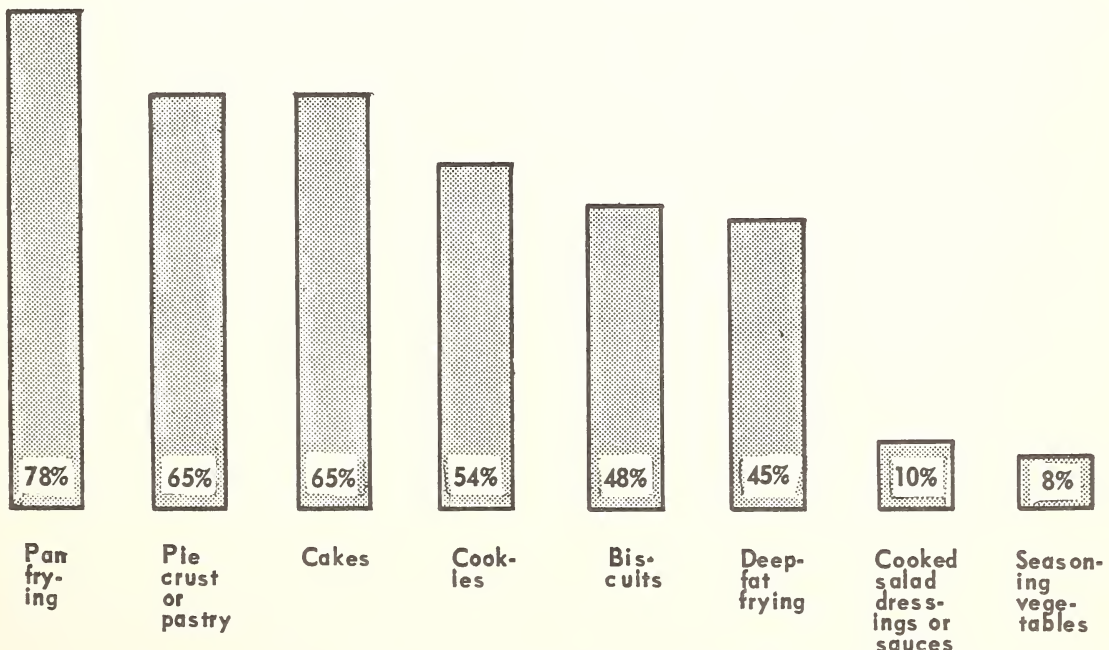


Figure 4

In general, there were statistically significant differences between rural and urban, North and South, old and young, high and low income, and different levels of education as to the percentages doing each kind of cooking.

Almost all background characteristics showed differences for deep-fat frying and for baking cookies. So far as cake baking was concerned, there were significant differences among the background groups with the exception of age and income. Biscuit baking varied by background, except for size of family and education, whereas the making of piecrusts showed variations except for age, education, and income.

The remaining kinds of cooking that were done with vegetable shortening--that is pan frying, cooked salad dressings and sauces, and seasoning vegetables--showed the smallest variations within groups. Pan frying and seasoning showed a regional difference and some age difference. Those who used this fat for cooked salad dressings showed no variation by background characteristics.

Among those who used vegetable shortening the incidence of use for *deep fat frying* was heavier in urban areas. This was true for the United States urban as well as for the urban North and the urban South. The larger families were more likely to do this kind of cooking, as were the better educated and those with higher incomes. As women moved into the 50-year age group the percentages who reported deep-fat frying with vegetable shortening dropped sharply.

As to *pan frying* the reported percentage of users was higher in the North, and in both regions it was higher in the urban than in the rural areas.

More rural women and more nonwhite women in the United States reported making *piecrust* than did urban and white women. The percentage was higher in the South than in the North and in the rural North as compared with the urban North. Larger families were more likely to report making *piecrusts* than smaller families.

Baking cookies was more likely to be reported for the North and for white families. Within the North the incidence was higher in rural than in urban areas. Within the South there was no rural-urban difference, but among the nonwhites there was a sharp drop. Small families were less likely to bake cookies, as were the less well educated and the lower income families. Those 30 to 39 years of age were most likely to bake cookies and those 50 and over least likely to do so.

Cake baking was highest in the rural United States and in the rural North. This rural-urban difference did not show up in the South. In this region there was a dropoff among the nonwhites. As family size increased so did the percentage of those who baked cakes. Among educational groups the peak was in the high-school group.

Biscuit baking was most frequent among rural and nonwhite families for the United States. It was much more popular in the South than in the North. But even within the North there was a rural-urban difference, the larger

percentages being in the rural areas. As age increased, so did the percentage that reported baking biscuits. As income increased baking of biscuits decreased.

Of the tabulations made for *seasoning vegetables* with vegetable shortening, the only difference that showed up was in the higher percentage in the nonwhite over the white (table 2).

Users' reasons for liking vegetable shortening.--Homemakers who used vegetable shortening most often gave as their reason the fact that the product cooked with it had good texture. Emphasis shifted somewhat by type of cooking, but the overall texture appeal was highest. In discussing deep-fat frying, texture was described as "not greasy," or "fat doesn't soak in." Homemakers said it was good for pan frying because the food "doesn't get soggy." In piecrusts it produced a "crisp, flaky" product, cookies were "crisp," and cakes and biscuits were "light and fluffy." The most frequent mentions for sauces, cooked salad dressings, and seasoning vegetables involved blandness and "tastelessness."

The highest proportion of mentions of texture was for piecrusts, in which the amount and kind of shortening used is so important. Freedom from objectionable taste was highest for seasoning vegetables. Smoking and burning came up fairly frequently for the two kinds of frying and was barely mentioned for most other kinds of cooking. The health aspect was most highly associated with frying, piecrusts, and seasoning. Final appearance, that is, browning, was most often reported for frying and for biscuits. The fact that the fat can be reused was associated only with frying. Lack of odor was an important appeal only in frying. Habit was a steady reason with slightly greater emphasis for piecrusts and biscuits and lowest emphasis for sauces and seasoning vegetables.

Refrigeration and certain other aspects of convenience were grouped together for a general category which was highest for piecrusts, cookies, and cakes. When cost and economy were mentioned as appeals, it was usually as a comparison with butter. In the detailed appendix tables, the shift in meaning of "convenience" can be seen for each kind of cooking.

When blending of ingredients was involved, the appeal of the texture of the fat itself was frequently mentioned (table 3).

Table 2.--Summary:^{1/} Percentages of homemakers reporting use of VEGETABLE SHORTENING for specified kinds of cooking, by background characteristics

| Background characteristics | Among users of vegetable shortening, percentages who used it for -- | | | | | | | | Number of cases |
|------------------------------|---|------------------------|------------------------|------------------------|------------------------|------------------------|--|------------------------------------|-----------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cookies | Cakes | Biscuits | Cooked salad dressings or sauces ^{2/} | Seasoning vegetables ^{2/} | |
| | Per-cent ^{3/} | Per-cent ^{3/} | Per-cent ^{3/} | Per-cent ^{3/} | Per-cent ^{3/} | Per-cent ^{3/} | Per-cent ^{3/} | Per-cent ^{3/} | Number |
| United States ----- | 45 | 78 | 65 | 54 | 65 | 48 | 10 | 8 | 1,252 |
| Rural----- | 37 | 76 | 72 | 56 | 71 | 56 | 9 | 10 | 313 |
| Urban ----- | 48 | 79 | 62 | 54 | 63 | 45 | 11 | 7 | 939 |
| White ----- | 45 | 78 | 64 | 56 | 65 | 46 | 10 | 6 | 1,173 |
| Nonwhite ----- | 47 | 79 | 75 | 32 | 62 | 71 | 12 | 29 | 80 |
| North ----- | 45 | 77 | 63 | 57 | 65 | 43 | 11 | 7 | 981 |
| Rural ----- | 37 | 74 | 71 | 65 | 74 | 50 | 9 | 6 | 401 |
| Urban ----- | 47 | 77 | 60 | 55 | 63 | 41 | 11 | 7 | 781 |
| South ----- | 45 | 83 | 73 | 45 | 63 | 66 | 8 | 12 | 677 |
| Rural ----- | 36 | 78 | 75 | 43 | 65 | 66 | 8 | 16 | 283 |
| Urban ----- | 51 | 87 | 72 | 47 | 62 | 67 | 9 | 10 | 395 |
| White ----- | 46 | 83 | 74 | 49 | 65 | 66 | 8 | 10 | 568 |
| Nonwhite ----- | 42 | 84 | 67 | 27 | 54 | 71 | 5 | 23 | 219 |
| Number in family | | | | | | | | | |
| 1 to 2 ----- | 38 | 78 | 54 | 42 | 54 | 46 | -- | -- | 452 |
| 3 to 4 ----- | 48 | 80 | 67 | 60 | 69 | 48 | -- | -- | 564 |
| 5 and over ----- | 54 | 76 | 69 | 64 | 76 | 52 | -- | -- | 235 |
| Age group ^{4/} | | | | | | | | | |
| 24 years and under | 58 | 84 | 67 | 54 | 64 | 40 | -- | -- | 123 |
| 25 to 29 ----- | 51 | 79 | 65 | 56 | 66 | 45 | -- | -- | 157 |
| 30 to 39 ----- | 48 | 81 | 63 | 59 | 69 | 45 | -- | -- | 313 |
| 40 to 49 ----- | 51 | 77 | 69 | 57 | 65 | 52 | -- | -- | 257 |
| 50 and over ----- | 33 | 75 | 63 | 49 | 62 | 52 | -- | -- | 383 |
| Education ^{5/} | | | | | | | | | |
| None or grammar school ----- | 35 | 75 | 64 | 47 | 62 | 47 | -- | -- | 386 |
| High school ----- | 50 | 80 | 67 | 57 | 69 | 48 | -- | -- | 656 |
| College ----- | 50 | 78 | 61 | 60 | 57 | 51 | -- | -- | 192 |
| Income group ^{6/} | | | | | | | | | |
| Low ----- | 35 | 76 | 66 | 45 | 61 | 53 | -- | -- | 323 |
| Middle ----- | 45 | 81 | 67 | 57 | 67 | 49 | -- | -- | 428 |
| High ----- | 54 | 78 | 62 | 57 | 65 | 45 | -- | -- | 453 |
| Size of place | | | | | | | | | |
| Metropolitan ----- | 48 | 79 | 61 | 53 | 61 | 44 | -- | -- | 795 |
| Township ----- | 47 | 82 | 70 | 60 | 72 | 56 | -- | -- | 144 |
| Rural ----- | 37 | 76 | 72 | 56 | 71 | 56 | -- | -- | 313 |

^{1/} For the detailed tables on which this summary is based, see appendix tables 39-46.

^{2/} Only the United States, region, race, and rural-urban residence tabulations were run for these 2 kinds of cooking.

^{3/} Percentages add to more than 100 because some users did more than 1 kind of cooking.

^{4/} Age was not ascertained for 19 respondents.

^{5/} Education was not ascertained for 18 respondents.

^{6/} Income was not ascertained for 49 respondents.

Table 3.--Summary:^{1/} Reasons users of vegetable shortening gave for *liking* to do specific kinds of cooking with this product

| Summary of reasons for liking | Vegetable shortening users who used it for -- | | | | | | | |
|--|---|------------|---------------------|---------|---------|-----------|----------------------------------|----------------------|
| | Deep-fat frying | Pan frying | Pie crust or pastry | Cookies | Cakes | Bis-cuits | Cooked salad dressings or sauces | Seasoning vegetables |
| | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| Texture of product ----- | 42 | 31 | 75 | 46 | 65 | 67 | 27 | -- |
| Taste ----- | 33 | 33 | 20 | 32 | 24 | 21 | 35 | 50 |
| Smoking, burning, heating ----- | 25 | 31 | 1 | 1 | 1 | 1 | 10 | -- |
| Health ----- | 24 | 25 | 15 | 9 | 6 | 10 | 3 | 14 |
| Appearance of product ----- | 24 | 23 | 7 | 4 | 5 | 15 | 9 | -- |
| Reuse ----- | 16 | 5 | -- | -- | -- | -- | -- | -- |
| Odor ----- | 14 | 15 | 2 | -- | 1 | 2 | 3 | 2 |
| Habit ----- | 14 | 12 | 18 | 16 | 16 | 18 | 10 | 7 |
| Refrigeration, convenience, freshness ---- | 9 | 9 | 12 | 15 | 16 | 9 | 4 | 2 |
| Cost and economy | 7 | 11 | 4 | 24 | 20 | 8 | 29 | 19 |
| Texture and appearance of fat ----- | 6 | 6 | 29 | 31 | 41 | 27 | 13 | 1 |
| Number of cases | 567 | 980 | 811 | 680 | 812 | 601 | 130 | 99 |

^{1/} This summary of reasons gives the more important frames of reference in which the homemakers answered. For the detailed tabulations from which these selected figures were taken, see tables 47 to 54.

When tabulated by the various background characteristics, reasons for using vegetable shortening for each kind of cooking showed the differences that are listed below.

When reasons and background characteristics are not noted it may be assumed either that there were no differences or that the differences were based on such a small number of cases as to be without statistical significance. The tables from which the following were abstracted are not published in this report, but they are available for reference.

Deep-fat frying:

| | <i>Region</i> | |
|------------------------------------|----------------------------|------------------------------------|
| Appearance of product, browning -- | North, 20% | South, 36% |
| Habit and experience ----- | North, 16 | South, 7 |
| | <i>Number in family</i> | |
| Taste ----- | 1 or 2, 25% | 3 or 4, 34% 5 or more, 40% |
| | <i>Education</i> | |
| Habit and experience -- | None or grammar school, 6% | High school, 15% College, 21% |

Pan frying:

| | | | | | |
|------------------------------------|--------------------------|------------|------------|------------|-----------------|
| | <i>Region</i> | | | | |
| Health ----- | North, 27% | South, 21% | | | |
| Appearance of product, browning -- | North, 21 | South, 27 | | | |
| Odor ----- | North, 14 | South, 20 | | | |
| | <i>Age of respondent</i> | | | | |
| Cost and economy -- | 24 or less, 19% | 25-29, 16% | 30-39, 11% | 40-49, 10% | 50 and over, 6% |
| Health ----- | 24 or less, 11 | 25-29, 12 | 30-39, 24 | 40-49, 30 | 50 and over, 35 |

Piecrust or pastry:

| | Race | | | | |
|------------------------------------|-------------------|---------------|------------|------------|------------------|
| Appearance of product, browning -- | White, 6% | Nonwhite, 20% | | | |
| | Region | | | | |
| Texture of product ----- | North, 72% | South, 83% | | | |
| Habit and good past experience -- | North, 20 | South, 14 | | | |
| Health ----- | North, 16 | South, 10 | | | |
| Convenience and refrigeration --- | North, 15 | South, 4 | | | |
| | Age of respondent | | | | |
| Health ----- | 24 or less, 3% | 25-29, 10% | 30-39, 13% | 40-49, 14% | 50 and over, 22% |

Cookies:

Residence

| | | |
|---------------------|------------|------------|
| Taste ----- | Rural, 39% | Urban, 30% |
| Cost and economy -- | Rural, 16 | Urban, 26 |

Region

| | | |
|---------------------|------------|------------|
| Texture of product- | North, 44% | South, 56% |
| Cost and economy -- | North, 26 | South, 16 |

Education

| | | | |
|-------------------------------------|-----------------------------|------------------|--------------|
| Texture of product -- | None or grammar school, 58% | High school, 42% | College, 42% |
| Taste ----- | None or grammar school, 27 | High school, 32 | College, 43 |
| Texture and appearance of fat ----- | None or grammar school, 23 | High school, 34 | College, 37 |
| Cost and economy ---- | None or grammar school, 19 | High school, 23 | College, 32 |

Income

| | | | |
|-----------------------|----------|-------------|-----------|
| Texture of product -- | Low, 55% | Middle, 43% | High, 46% |
|-----------------------|----------|-------------|-----------|

Cakes:

Race

| | | |
|-------------|------------|---------------|
| Taste ----- | White, 23% | Nonwhite, 40% |
|-------------|------------|---------------|

Region

| | | |
|-----------------------|------------|------------|
| Texture of product -- | North, 62% | South, 75% |
| Cost and economy ---- | North, 22 | South, 15 |

Age of respondent

| | | | | | |
|----------------------------|-----------------|------------|------------|------------|------------------|
| Habit and experience ----- | 24 or less, 28% | 25-29, 14% | 30-39, 16% | 40-49, 17% | 50 and over, 11% |
| Cost and economy - | 24 or less, 11 | 25-29, 21 | 30-39, 18 | 40-49, 20 | 50 and over, 25 |

Education

| | | | |
|---------------------------------|-----------------------------|------------------|--------------|
| Texture of product ----- | None or grammar school, 70% | High school, 64% | College, 57% |
| Texture and appearance of fat - | None or grammar school, 34 | High school, 42 | College, 47 |
| Cost and economy ----- | None or grammar school, 17 | High school, 19 | College, 32 |

Income

| | | | |
|-------------------------|----------|-------------|-----------|
| Texture of product ---- | Low, 72% | Middle, 64% | High, 61% |
| Cost and economy ----- | Low, 14 | Middle, 21 | High, 24 |

Biscuits:

Residence

Habit and good experience -- Rural, 12% Urban, 21%

Race

Appearance of product ----- White, 13% Nonwhite, 27%

Region

Texture of product ----- North, 63% South, 75%

Appearance of product ----- North, 12 South, 21

Cooked salad dressings or sauces:

Region

Cost and economy ----- North, 33% South, 7%

Seasoning vegetables:

Region

Cost and economy ----- North, 27% South, 5%

Reasons for liking vegetable shortening which reappeared most often as a differentiation between groups was the "cost and economy," and "texture of the product." Next in importance were "habit," "appearance of product," "taste," and "health."

The economy appeal was mentioned in more instances by northern respondents. In two cases, it was the college group. For one kind of cooking economy appealed to urban groups, one time it appealed to those with high income. One time older homemakers spoke of economy, another time it was the concern of the younger group.

Texture of product appeared to be of more concern in the South for most kinds of cooking. In other instances it showed up with greater emphasis among those who attended grammar school only, and the low-income group.

Users' reasons for disliking vegetable shortening.--Because the questions that concerned the reasons for using encourage respondents to talk primarily in terms of desirable characteristics of the fat, a final set of questions was asked of users of vegetable shortening to find out what they disliked about it and the kinds of cooking to which their complaints applied.

A little more than 1 in 10 users of vegetable shortening said that it was too bland to use in seasoning vegetables. The remaining few complaints were scattered among the different types of cooking (table 55).

Nonusers of vegetable shortening.—Among the homemakers who had not used vegetable shortening during the year just previous to interview, more than half said they had used it previously.

Most of these previous users dropped out of the market in the postwar period, primarily in the 2 or 3 years before 1950. A considerably smaller proportion was lost during World War II (tables 56, 57).

70 percent had discontinued use in the previous 1 to 5 years
20 percent had discontinued use in the previous 5 or more years

Nonusers' reasons for not using vegetable shortening.--Half of those who did not use vegetable shortening said they did not do so because of lard--either because they produced their own lard or because they preferred to use lard for some other reason. The next largest percentages were for reasons of economy, not much cooking done, and preference for another fat. As shown in table 58, among nonusers of vegetable shortening:

25 percent have own lard
25 percent use lard and prefer it
16 percent said they didn't do much cooking
13 percent said vegetable shortening was too expensive
13 percent preferred something else
12 percent said lard was cheaper

The differences in emphasis that appeared among the different background groups were:

Residence

| | | |
|---------------------------|------------|-----------|
| Have own lard ----- | Rural, 47% | Urban, 5% |
| Do not do much cooking -- | Rural, 4 | Urban, 26 |
| Prefer another fat ----- | Rural, 5 | Urban, 19 |

Race

| | | |
|-------------------|------------|---------------|
| Have own lard --- | White, 27% | Nonwhite, 13% |
| Prefer lard ----- | White, 22 | Nonwhite, 41 |

Region

| | | |
|---------------------------|------------|-----------|
| Do not do much cooking -- | North, 25% | South, 3% |
|---------------------------|------------|-----------|

Size of family

| | | | |
|---------------------------|-------------|------------|---------------|
| Do not do much cooking -- | 1 or 2, 28% | 3 or 4, 8% | 5 or more, 5% |
|---------------------------|-------------|------------|---------------|

Income

| | | | |
|---------------------------|----------|-------------|-----------|
| Do not do much cooking -- | Low, 12% | Middle, 14% | High, 28% |
|---------------------------|----------|-------------|-----------|

"Do not do much cooking" was the reason for nonuse associated with respondents who were urban, northern, in small families, and who had high incomes. Those who were rural and those who were white reported "have own lard" with greater frequency than did the urban and those who were nonwhite.

Lard

Kinds of cooking in which used.--Among users of lard, who represented about half of the homemakers interviewed, 3 in 4 said they used it for pan frying, 2 in 3 for piecrust or pastry, and more than half for biscuits. Slightly less than half used it for deep-fat frying and about a fourth said they used it for cakes, cookies, and seasoning vegetables. Very few used it for sauces or cooked salad dressings (fig. 5).

A comparison of this use with the use reported for vegetable shortening showed similar percentages reporting both fats for pan frying, for piecrusts, for biscuits, and for deep-fat frying. More than half of the users of vegetable shortening said they used it for cakes and for cookies, but only a fourth of those who used lard said they used this fat for these delicacies. Those who used lard also reported less use for sauces and salad dressings. The only kinds of cooking in which users of lard reported higher percentages were for biscuits and for seasoning vegetables. For biscuits there was a slightly higher percentage and for seasoning vegetables, the figure almost tripled.

AMONG USERS OF LARD, PERCENTAGES WHO SAID THEY USED IT
FOR DIFFERENT KINDS OF COOKING

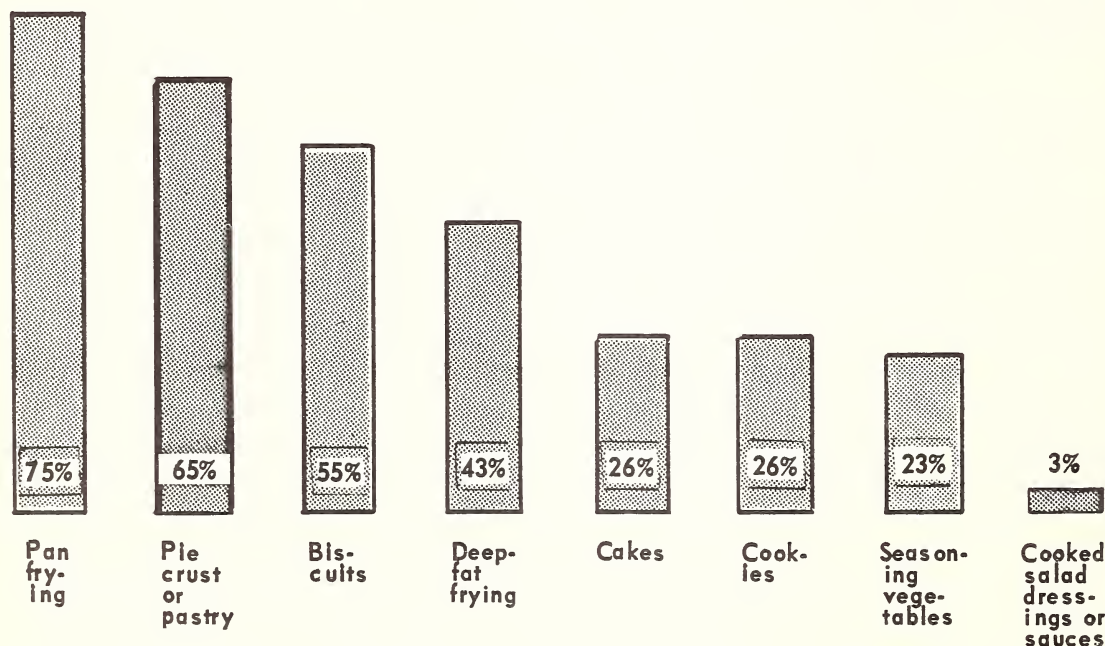


Figure 5

Of the seven major background characteristics, rural-urban, white-nonwhite, North-South, size of family, age of homemaker, education of homemaker and income of family, most differences were found regarding pan frying, cakes, biscuits, and seasoning vegetables. *Pan frying* was done by a higher proportion of the rural than of the urban, of the nonwhites, the South, the less well educated, and the lower income families. Size of family and age of homemaker showed no significant differences. Rural users of lard were more likely to use it for *cakes* than were urban homemakers, as were those in the South, the larger families, the youngest homemakers, and the low-income families.

In the United States as a whole emphasis on baking *biscuits* was greater in rural than in urban areas, among the nonwhites, the South, the least well educated, and the low-income group. *Seasoning vegetables* was also reported more frequently in rural areas, among nonwhites, the South, the less well educated, and the low-income group.

Deep-fat frying was heavier in the North, among the larger families, women under 40 years of age, and those who had attended high school or college.

Those who made *piecrusts* with lard were heavier in proportion among rural areas, larger families, and older homemakers. *Cooky* baking with lard was more rural than urban, and was higher among whites and among larger families (table 4).

Users' reasons for liking lard.--As in the case of vegetable shortening, homemakers who used lard for specific kinds of cooking gave the texture of the final cooked product most frequently as a reason--crisp texture in the case of pastry and cookies, and light and soft in the case of cakes and biscuits. The most frequently reported reason for both pan frying and seasoning vegetables with lard was the taste and for deep-fat frying the economy (table 5).

On the whole, when homemakers said they used lard because of cost and economy, it was primarily because the initial cost was less--sometimes because lard goes further in cooking. When taste was the appeal, it was usually expressed as a general statement, although it was sometimes specified more carefully in terms of the "meaty" taste. Appearance of the product was most often the aspect of browning and texture varied by product--crisp and not greasy for frying, crisp for piecrusts and cookies, and light for cakes and biscuits. The general category of smoking-burning-heating differed as it was reported for each kind of cooking. For deep-fat frying it was primarily because lard heats quickly, for pan frying and cookies because the food doesn't stick to the pan, and for seasoning vegetables because it melts quickly.

Table 4.--Summary:^{1/} Percentages of homemakers reporting use of LARD for specified kinds of cooking by background characteristics

| Background characteristics | Among users of lard, percentages who used it for -- | | | | | | | | Number of cases |
|------------------------------|---|-------------|---------------------|-------------|-------------|-------------|--|----------------------|-----------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cookies | Cakes | Bis-cuits | Cooked salad dressings or sauces ^{2/} | Seasoning vegetables | |
| | Per-cent 3/ | Per-cent 3/ | Per-cent 3/ | Per-cent 3/ | Per-cent 3/ | Per-cent 3/ | Per-cent 3/ | Per-cent 3/ | Number |
| United States ----- | 43 | 75 | 65 | 26 | 26 | 55 | 3 | 23 | 789 |
| Rural ----- | 43 | 84 | 76 | 35 | 38 | 71 | -- | 33 | 342 |
| Urban ----- | 42 | 68 | 56 | 18 | 16 | 43 | -- | 15 | 447 |
| White ----- | 44 | 74 | 66 | 28 | 25 | 52 | -- | 20 | 681 |
| Nonwhite ----- | 36 | 86 | 58 | 13 | 28 | 80 | -- | 37 | 108 |
| North ----- | 46 | 69 | 66 | 27 | 23 | 49 | -- | 12 | 539 |
| Rural ----- | 50 | 80 | 80 | 41 | 37 | 55 | -- | 18 | 373 |
| Urban ----- | 44 | 64 | 58 | 20 | 16 | 35 | -- | 9 | 352 |
| South ----- | 36 | 88 | 62 | 23 | 31 | 85 | -- | 45 | 625 |
| Rural ----- | 35 | 90 | 70 | 28 | 39 | 90 | -- | 50 | 389 |
| Urban ----- | 37 | 85 | 49 | 14 | 19 | 75 | -- | 37 | 237 |
| White ----- | 37 | 86 | 63 | 26 | 32 | 83 | -- | 44 | 444 |
| Nonwhite ----- | 33 | 93 | 60 | 14 | 31 | 89 | -- | 47 | 363 |
| Number in family | | | | | | | | | |
| 1 or 2 ----- | 34 | 79 | 59 | 20 | 20 | 55 | -- | 21 | 262 |
| 3 or 4 ----- | 48 | 71 | 66 | 27 | 25 | 54 | -- | 22 | 341 |
| 5 or more ----- | 44 | 78 | 70 | 32 | 36 | 58 | -- | 27 | 186 |
| Age group ^{4/} | | | | | | | | | |
| 24 years and under | 59 | 84 | 54 | 30 | 40 | 59 | -- | 29 | 76 |
| 25 to 29 ----- | 49 | 77 | 57 | 22 | 25 | 48 | -- | 24 | 95 |
| 30 to 39 ----- | 51 | 73 | 64 | 27 | 27 | 55 | -- | 20 | 200 |
| 40 to 49 ----- | 39 | 75 | 71 | 28 | 23 | 60 | -- | 22 | 141 |
| 50 and over ----- | 33 | 74 | 68 | 24 | 22 | 56 | -- | 23 | 268 |
| Education ^{5/} | | | | | | | | | |
| None or grammar school ----- | 35 | 85 | 63 | 25 | 28 | 62 | -- | 34 | 336 |
| High school ----- | 49 | 71 | 65 | 27 | 25 | 51 | -- | 16 | 373 |
| College ----- | 49 | 54 | 70 | 21 | 18 | 48 | -- | 8 | 72 |
| Income group ^{6/} | | | | | | | | | |
| Low ----- | 39 | 86 | 66 | 28 | 31 | 70 | -- | 36 | 317 |
| Middle ----- | 46 | 72 | 66 | 28 | 25 | 49 | -- | 16 | 253 |
| High ----- | 45 | 62 | 61 | 21 | 18 | 42 | -- | 11 | 195 |
| Size of place | | | | | | | | | |
| Metropolitan ----- | 43 | 67 | 53 | 16 | 15 | 38 | -- | 14 | 360 |
| Township ----- | 42 | 73 | 67 | 30 | 24 | 62 | -- | 16 | 87 |
| Rural ----- | 43 | 84 | 76 | 35 | 38 | 71 | -- | 33 | 342 |

^{1/} For detailed tables on which this summary is based, see appendix tables 59 to 66.

^{2/} Number of cases too small for detailed tabulations.

^{3/} Percentages add to more than 100 because some users did more than 1 kind of cooking.

^{4/} Age was not ascertained for 9 respondents.

^{5/} Education was not ascertained for 8 respondents.

^{6/} Income was not ascertained for 24 respondents.

Table 5.-- Summary:^{1/} Reasons users of lard gave for *liking* to do specific kinds of cooking with this product

| Summary of reasons for liking | Lard users who used it for -- | | | | | | | |
|---------------------------------|-------------------------------|------------|---------------------|---------|---------|----------|----------------------------------|----------------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cookies | Cakes | Biscuits | Cooked salad dressings or sauces | Seasoning vegetables |
| | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| Cost and economy | 37 | 25 | 16 | 23 | 18 | 15 | -- | 8 |
| Habit ----- | 27 | 29 | 32 | 29 | 23 | 25 | -- | 8 |
| Taste ----- | 27 | 35 | 18 | 19 | 17 | 21 | -- | 59 |
| Appearance of product ----- | 24 | 22 | 8 | 7 | 6 | 16 | -- | -- |
| Texture of product ----- | 16 | 10 | 69 | 43 | 38 | 58 | -- | 16 |
| Smoking, burning, heating ----- | 11 | 15 | 1 | 3 | 1 | 2 | -- | 2 |
| Reuse ----- | 6 | -- | -- | -- | -- | -- | -- | -- |
| Substitute only | 6 | 9 | 4 | 13 | 21 | 5 | -- | 35 |
| Product stays fresh ----- | -- | -- | 1 | 5 | 4 | 1 | -- | -- |
| Mixes, blends well ----- | -- | -- | 9 | 9 | 9 | 12 | -- | 6 |
| Number of cases - | 337 | 593 | 508 | 202 | 202 | 437 | ^{2/} 24 | 179 |

^{1/} This summary of reasons gives the more important frames of reference in which the homemakers answered. For the detailed tabulations from which these selected figures were taken, see tables 67 to 73.

^{2/} Number of cases too small for detailed tabulations.

A comparison of the summary reasons according to background groups showed the following significant differences:

Deep-fat frying:

Residence

| | | |
|----------------------|------------|------------|
| Cost and economy --- | Rural, 29% | Urban, 42% |
| Habit ----- | Rural, 39 | Urban, 18 |

Region

| | | |
|--------------------------|------------|------------|
| Cost and economy ----- | North, 42% | South, 21% |
| Taste ----- | North, 23 | South, 36 |
| Appearance of product -- | North, 20 | South, 33 |

Number in family

| | | | |
|----------------------|-------------|-------------|----------------|
| Cost and economy --- | 1 or 2, 28% | 3 or 4, 41% | 5 or more, 35% |
|----------------------|-------------|-------------|----------------|

Education

| | | |
|----------------------|--------------------------------|------------------|
| Cost and economy --- | None or grammar school, 26% | High school, 40% |
|----------------------|--------------------------------|------------------|

Income

| | | | |
|----------------------|----------|-------------|-----------|
| Cost and economy --- | Low, 28% | Middle, 40% | High, 45% |
|----------------------|----------|-------------|-----------|

Pan frying:

Residence

| | | |
|----------------------|------------|------------|
| Habit ----- | Rural, 37% | Urban, 21% |
| Cost and economy --- | Rural, 21 | Urban, 29 |

Region

| | | |
|-------------------------|------------|------------|
| Cost and economy ----- | North, 28% | South, 20% |
| Appearance of product - | North, 18 | South, 28 |
| Texture of product ---- | North, 7 | South, 15 |

Number in family

| | | | |
|-----------------------------|-------------|-------------|----------------|
| Smoking, burning, heating - | 1 or 2, 12% | 3 or 4, 20% | 5 or more, 12% |
|-----------------------------|-------------|-------------|----------------|

Age of respondent

| | | | | | |
|------------|-----------------|------------|------------|------------|------------------|
| Habit ---- | 24 or less, 32% | 25-29, 17% | 30-39, 29% | 40-49, 27% | 50 and over, 33% |
|------------|-----------------|------------|------------|------------|------------------|

Piecrust or pastry:

Race

| | | |
|------------|------------|---------------|
| Habit ---- | White, 34% | Nonwhite, 17% |
|------------|------------|---------------|

Region

| | | |
|---------------------|------------|------------|
| Habit ----- | North, 34% | South, 26% |
| Cost and economy -- | North, 19 | South, 9 |

Cookies:

| | <i>Residence</i> | |
|------------------------|------------------|------------|
| Texture of product --- | Rural, 51% | Urban, 31% |
| | <i>Region</i> | |
| Texture of product --- | North, 38% | South, 55% |
| Habit ----- | North, 33 | South, 20 |
| Cost and economy ----- | North, 27 | South, 10 |

Cakes:

| | <i>Residence</i> | |
|------------------------|------------------|------------|
| Texture of product --- | Rural, 45% | Urban, 26% |
| | <i>Region</i> | |
| Texture of product --- | North, 34% | South, 44% |
| Substitute ----- | North, 16 | South, 29 |
| Cost and economy ----- | North, 25 | South, 6 |

Biscuits:

| | <i>Residence</i> | |
|------------------------|------------------|------------|
| Texture of product --- | Rural, 66% | Urban, 48% |
| | <i>Region</i> | |
| Texture of product --- | North, 53% | South, 63% |
| Taste ----- | North, 17 | South, 25 |

Seasoning vegetables:

| | <i>Region</i> | |
|----------------|---------------|------------|
| Taste ----- | North, 47% | South, 65% |
| Substitute --- | North, 26 | South, 41 |

Thus, where differences occur we see the urban United States and the North fairly consistently concerned about cost. Habit tends to be reported a little more frequently in rural areas, and in the North. Texture is repeatedly higher in the South and in rural areas. Taste and appearance are higher in the South than in the North. In the two uses in which differences appeared regarding lard as a substitute, the percentage was higher in the South than in the North.

Users' reasons for disliking lard.--Each homemaker who used lard for a specific kind of cooking was first asked what she liked about the fat and then what she disliked about it for each way in which she used it. On the average, more than half of the homemakers who used lard for the various kinds of cooking, said there was nothing they disliked about it. Its use for piecrust or pastry and biscuits received most approval, for cakes and deep-fat frying the least.

Of the specific aspects most criticized, texture of product and taste were highest on the list. Those who disliked texture spoke of its greasiness. They said the product was greasy and soggy. Taste, as usual, was hard to describe. Most answers were simply, "Don't like the taste." Those who described the aspect of taste they disliked spoke of the meaty flavor.

Only among those who used it for frying was there a volunteered criticism of smoking and burning (table 6).

Table 6.--Summary:^{1/} Reasons users of lard gave for *disliking* lard for specific kinds of cooking

| Summary of reasons for disliking | Lard users who used it for -- | | | | | | | |
|---|-------------------------------|------------|---------------------|---------|---------|-----------|----------------------------------|----------------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cookies | Cakes | Bis-cuits | Cooked salad dressings or sauces | Seasoning vegetables |
| | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| Texture of product ----- | 21 | 13 | 11 | 13 | 28 | 7 | -- | 13 |
| Smoking, burning, heating ----- | 17 | 18 | 1 | -- | -- | -- | -- | -- |
| Taste ----- | 12 | 13 | 6 | 21 | 24 | 5 | -- | 28 |
| Health ----- | 8 | 7 | 4 | 2 | 2 | 4 | -- | 3 |
| Odor ----- | 8 | 6 | 2 | -- | 1 | 1 | -- | -- |
| Refrigeration, convenience, freshness ----- | 4 | 4 | 5 | 3 | 3 | 3 | -- | 2 |
| If uses too much, have failure --- | -- | 1 | 4 | 8 | 8 | 4 | -- | -- |
| Uses, prefers meat | -- | -- | -- | -- | -- | -- | -- | 7 |
| Nothing disliked - | 46 | 50 | 67 | 50 | 39 | 73 | -- | 50 |
| Number of cases -- | 337 | 593 | 508 | 202 | 202 | 437 | ^{2/} 24 | 179 |

^{1/} This summary of reasons gives the more important frames of reference in which the homemakers answered. For the detailed tabulations from which these selected figures were taken, see tables 74 to 80.

^{2/} Number of cases too small for detailed tabulations.

The following outline abstracts the few significant differences that appeared when the various background groups were tabulated by reasons for disliking. The only reasons showing differences were texture of product and taste. These occurred only for pan frying and cakes.

Among users who said there was nothing they disliked about lard, there were single instances of differences by education, income, residence, and a number by region. The answer of "nothing disliked" in these cases was highest among the grade-school, low-income, rural residence, and southern groups.

Deep-fat frying:

Region

Nothing disliked --- North, 43% South, 52%

Pan frying:

Region

Nothing disliked --- North, 46% South, 57%

Age of respondent

Texture of product- 24 or less, 14% 25-29, 25% 30-39, 14% 40-49, 12% 50 and over, 9%

Nothing disliked -- 24 or less, 52 25-29, 41 30-39, 48 40-49, 50 50 and over, 55

Education

Nothing disliked -- None or grammar school, 56% High school, 47%

Income

Texture of product -- Low, 9% Middle, 18% High, 17%
Nothing disliked ---- Low, 55 Middle, 45 High, 48

Piecrust and pastry - (No differences by background groups)

Cookies:

Residence

Nothing disliked -- Rural, 56% Urban, 42%

Region

Nothing disliked -- North, 45% South, 64%

Cakes:

Region

Taste ----- North, 18% South, 33%

Biscuits - (No differences by background groups)

Seasoning vegetables:

Region

Nothing disliked -- North, 41% South, 56%

Users of lard who gave reasons for not using it for a specific kind of cooking.--Homemakers who used lard for some but not for all kinds of cooking, were asked "why" for each nonuse. Emphasis given by these respondents differed from the dislikes of those who used it even though they disliked some things about it.

This group talked a great deal of habit, to which they gave a new meaning--they were accustomed to another fat or they preferred another fat. For each kind of cooking more than half of the homemakers said this.

Considerably larger percentages in this group objected to the taste and health aspects of lard and slightly larger percentages disliked the texture of the final product--its greasiness or sogginess (table 7).

Table 7.-- *Summary:*^{1/} Reasons users of lard gave for *not using* it for a specific kind of cooking

| Summary of reasons for disliking | Lard users who did not use it for -- | | | | | | | |
|----------------------------------|--------------------------------------|----------------|-----------------------|----------------|----------------|----------------|-----------------------------------|------------------------|
| | Deep-fat frying | Pan frying | Pie - crust or pastry | Cookies | Cakes | Bis-cuits | Cooked salad dress-ings or sauces | Season-ing vege-tables |
| | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> |
| Habit ----- | 52 | 61 | 55 | 61 | 54 | 53 | 64 | 58 |
| Texture of product ----- | 39 | 22 | 52 | 28 | 41 | 31 | 15 | 24 |
| Smoking, burn-ing, heating - | 21 | 13 | -- | -- | -- | -- | -- | -- |
| Taste ----- | 19 | 32 | 26 | 44 | 44 | 24 | 58 | 67 |
| Health ----- | 17 | 17 | 11 | 10 | 5 | 13 | 4 | 6 |
| Can't be reused | 9 | -- | -- | -- | -- | -- | -- | -- |
| Odor-smells strong ----- | 9 | 6 | 4 | 1 | 2 | 2 | 1 | 1 |
| Appearance of product ----- | 5 | 2 | 3 | -- | 1 | 3 | -- | -- |
| Refrigeration - | 5 | 4 | 4 | 3 | 3 | 3 | -- | -- |
| Texture of fat - | -- | -- | 13 | 11 | 12 | 12 | 2 | 1 |
| Number of cases | 108 | 189 | 136 | 299 | 411 | 122 | 280 | 569 |

^{1/} This summary of reasons gives the more important frames of reference in which the homemakers answered. For the detailed tabulations from which these selected figures were taken, see tables 81 to 88.

About the same percentages disliked its smoking, odor, and refrigeration problems as did those who used it for the different kinds of cooking.

On the whole, the personal characteristics tabulations of residence, region, race, size of family, age and education of homemaker, and family income showed few differences from the United States averages.

The instances of differences in percentages clustered around habit, texture of product, and taste. Habit, or being accustomed to using something else, tended to be mentioned by a higher proportion in the North than in the South for pan frying and piecrust. However, for seasoning vegetables a higher proportion in the South said they were accustomed to something else. Dislike of the texture of the product was higher in the South than in the North as the reason for not using lard for a specific kind of cooking.

Deep-fat frying: - (No differences by background groups)

Pan frying:

| | <i>Residence</i> | |
|-------------|------------------|------------|
| Taste ----- | Rural, 45% | Urban, 27% |

| | <i>Region</i> | |
|-------------|---------------|------------|
| Habit ----- | North, 64% | South, 47% |
| Smoking --- | North, 10 | South, 30 |

Piecrust or pastry:

| | <i>Region</i> | |
|----------------------|---------------|------------|
| Habit ----- | North, 63% | South, 38% |
| Texture of product - | North, 46 | South, 65 |

Cookies:

| | <i>Region</i> | |
|----------------------|---------------|------------|
| Texture of product - | North, 25% | South, 39% |

| | <i>Education</i> | |
|-------------|-----------------------------|------------------|
| Habit ----- | None or grammar school, 73% | High school, 57% |

Cakes:

| | <i>Residence</i> | |
|-----------------------|------------------|------------|
| Texture of product -- | Rural, 49% | Urban, 36% |

| | <i>Region</i> | |
|-----------------------|---------------|------------|
| Texture of product -- | North, 37% | South, 50% |

| | <i>Income</i> | | |
|-----------------------|---------------|-------------|-----------|
| Texture of product -- | Low, 50% | Middle, 40% | High, 33% |

Biscuits - (No differences by background groups)

Cooked salad dressings or sauces:

| | <i>Residence</i> | |
|-----------|------------------|------------|
| Taste --- | Rural, 69% | Urban, 52% |

Seasoning vegetables:

| | <i>Region</i> | |
|-----------|---------------|------------|
| Taste --- | North, 70% | South, 58% |
| Habit --- | North, 56 | South, 67 |

Users who disliked the taste or the smoking of lard.--When the interviewer had completed the entire set of lard questions she checked all the dislike answers to ascertain whether the respondent had volunteered any criticism of the taste of this product for any kind of cooking. If no mention had been made up to this point, a direct question was asked, "Is there anything about the taste of lard that you don't like?"

For the United States 70 percent of the homemakers spontaneously mentioned a taste dislike for lard in at least one kind of cooking. In answer to the direct question an additional 3 percent said they disliked something about the taste.

The North was somewhat more critical of taste than was the South. The percentage disliking the taste rose slightly with larger families, with more education, and with higher income (table 89).

Users of lard mentioned taste dislikes, either spontaneously or non-spontaneously for the following kinds of cooking:

Percentage disliking taste

| | |
|---------------------------------------|----|
| Seasoning vegetables ----- | 74 |
| Cakes ----- | 36 |
| Cooked salad dressings or sauces ---- | 29 |
| Cookies ----- | 26 |
| Pan frying ----- | 24 |
| Deep-fat frying ----- | 11 |
| Piecrust or pastry ----- | 9 |
| Biscuits ----- | 7 |
| Baking (unspecified) ----- | 4 |

The groups showing the highest percentage of taste dislike of lard for seasoning vegetables were in the,

North, 80%
College-educated, 80%
High income, 80%

The largest proportions reporting taste dislike for cakes were among the,

Nonwhite, 47%
South, 45%

Taste dislike for cooked salad dressings or sauces was highest among the,

College-educated, 51%
High income, 42%
North, 35%
White, 31%

Taste dislike for cookies was highest among the,

College-educated, 39%
High income, 30%

Taste dislike for pan frying was almost identical within all background groups. The highest was among those,

25 to 29 years old, 32%
24 years and under, 25%

See appendix table 90 for detailed tabulations.

The problem of smoke was treated in the same way as the problem of taste; that is, if the homemaker did not discuss it herself in answer to any of the dislike questions she was asked directly, "Do you find that when you fry with lard it smokes more than you would like?"

In contrast to the objections to taste, smoke was mentioned spontaneously by a fairly small proportion, 13 percent. It was mentioned as a result of probing by an additional 37 percent, giving a final total of 50 percent for those who had complaints about smoke.

The percentage of those complaining about smoke was higher in the North than in the South, homemakers under 50 complained of this more than those over 50, and those in the middle and upper income groups were more concerned than were those in the lower income group.

Other differences occurred within the background groups but in these instances the number of cases was too small for statistical significance (table 91).

Nonusers of lard.--About half of the homemakers in the country as a whole said they had not used lard in the year previous to interview. Two in three of these nonusers had used it at some previous time. While 7 in 10 of the previous users of vegetable shortening had discontinued its use in the postwar period, only 4 in 10 of the previous users of lard had discontinued its use in that period.

42 percent had discontinued use in the previous 1 to 5 years
53 percent had discontinued use in the previous 5 or more years

Rural areas reported a higher proportion of previous users than did urban areas, and the South more than the North. Smaller families, older women, lower educated and lower income families also reported higher percentages of previous use (tables 92, 93).

Nonusers' reasons for not using lard.--The most frequently reported reason for nonuse was a preference for vegetable shortening. The next largest percentages were for reasons of "health," objections to greasiness and to taste. As shown in table 94, among nonusers of lard:

30% preferred vegetable shortening
26% disliked "health" aspects of lard
23% disliked greasiness
22% disliked taste
14% disliked odor

Reasons given by the different background groups showed similar percentage distributions. The few differences were,

Residence

Health ----- Rural, 35% Urban, 24%

Region

Prefer vegetable shortening -- North, 32% South, 24%
Don't like odor ----- North, 12 South, 23

Size of family

Health --- 1 to 2, 31% 3 to 4, 22% 5 and over, 23%

Age of respondent

Health --- 24 or less, 6% 25-29, 14% 30-39, 21% 40-49, 26% 50 and over, 39%
Taste ---- 24 or less, 23 25-29, 31 30-39, 21 40-49, 23 50 and over, 19

Education

Taste ---- None or grammar school, 17% High school, 26% College, 20%
Health --- None or grammar school, 33 High school, 22 College, 26

Income

Health --- Low, 34% Middle, 25% High, 21%

Concern about health seemed more rural, more important to small families, older women, the least well educated, and those with low incomes. Dislike of taste was more characteristic of the 25 to 29 year age groups and the middle educated group.

Survey findings show a considerably heavier spontaneous complaint about the *taste* of lard among those who used it than among those who were nonusers. It would seem that even though 70 percent of the users are ready to complain about the taste aspects of this product, they are still willing to use it. Actually, most user complaints came without probing. Only 24 percent of the nonusers volunteered this complaint and, in contrast to users, a fairly large percentage admitted to taste complaints when reminded of the subject.

Most of the nonuser homemakers who found the taste of lard objectionable said this was one of the reasons why they were nonusers; 9 in 10 of the group said this (tables 95, 96).

A very small percentage of the nonusers complained spontaneously of *smoke*-but when they were asked specifically about smoke, many said this was a problem. Overall, about half of these homemakers said this was an undesirable characteristic of lard. Three in four of those who objected to lard smoking said it was one of the reasons why they did not use this fat (tables 97, 98).

Differences between users and nonusers on the subject of smoke were much less extreme than for taste objections. Even though users were more likely to volunteer criticism of smoke, the final percentages of homemakers in the two groups who made this complaint were almost the same (table 8).

Only 1 in 20 homemakers, without probing, said they had complaints concerning lard *containers*. Further questioning brought the total to 22 percent. About 2 in 3 of those who disliked something about the containers said this was one of their reasons for nonuse. As shown in tables 99 to 101, those who had objections to the containers used for lard said it was because the containers were:

Messy to handle, lard soaks into paper ---- 42%
Metal, glass containers more convenient --- 16
Prefer metal containers, no reason given -- 10

The special effort made to ascertain consumer reaction to taste, smoke, and containers was the result of concern about the downward trend, in consumption of lard, and the interest in the relationship, if any, between consumption and criticism of those three aspects of lard.

Table 8.--Homemakers who disliked the taste, smoke, and containers of lard

| Dislikes | Spontaneous mention | Nonspontaneous mention | Total dislike | Number of cases |
|---------------------------------------|------------------------|---------------------------|------------------|-----------------------|
| | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Number</i> |
| <u>Nonusers who had dislikes for:</u> | | | | |
| Taste ----- | 24 | 22 | 46 | 796 |
| Smoke ----- | 5 | 40 | 45 | 796 |
| Containers ----- | 5 | 17 | 22 | 796 |
| <u>Users who had dislikes for:</u> | | | | |
| Taste ----- | 70 | 3 | 73 | 808 |
| Smoke ----- | 13 | 37 | 50 | 808 |
| Containers ----- | -- | -- | -- | <u>1/</u> |

1/ Lard users were asked as to dislikes for specific kinds of cooking and, therefore, had no opportunity to speak spontaneously about containers. For data on users' preferences for size and type of containers see section on packaging.

Shortening Compound

Kinds of cooking in which used.--Among the users of shortening compound, more than half said they used it for pan frying, and piecrust or pastry; less than half used it for deep-fat frying and biscuits; and about a third used it for cakes and cookies. Small percentages used it for seasoning vegetables and for cooked salad dressings or sauces (fig. 6).

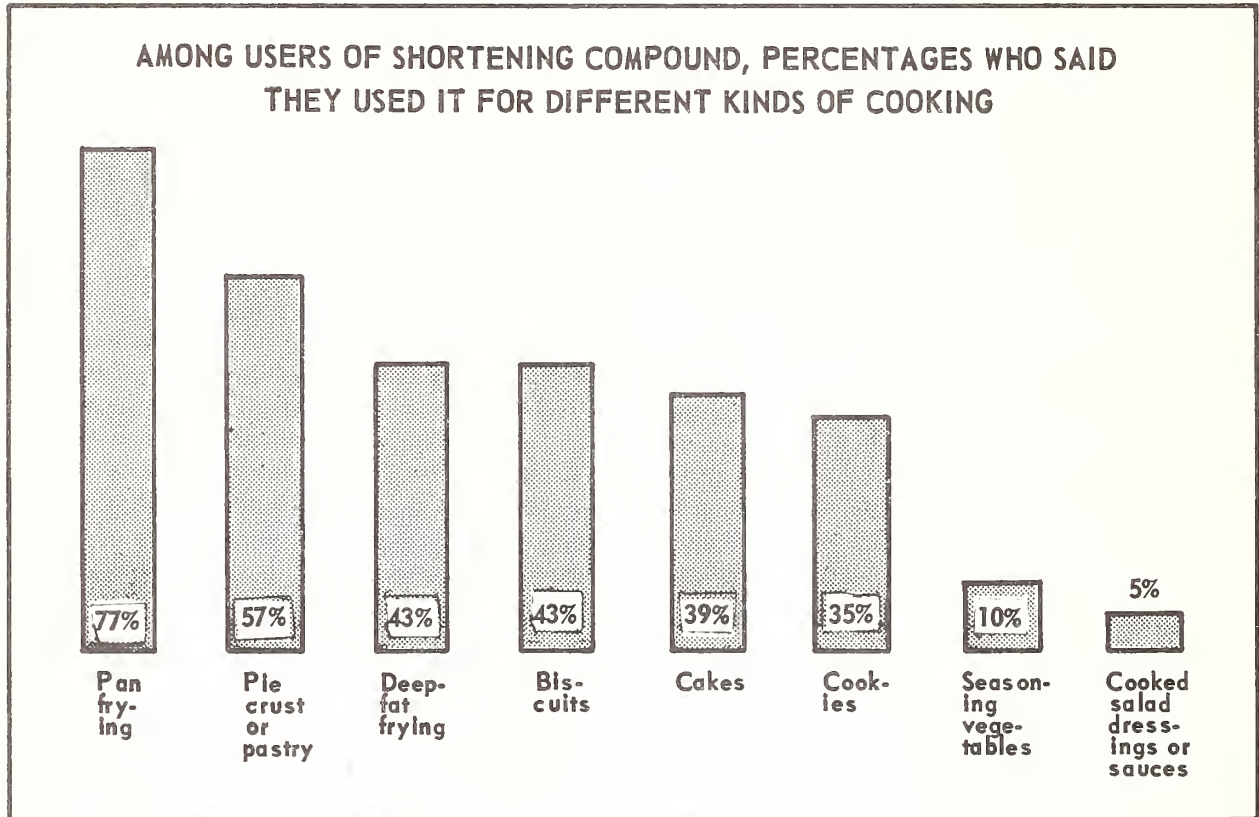


Figure 6

In four kinds of cooking we find the habits of users of shortening compound somewhere between those of users of vegetable shortening and users of lard. The percentage who said they used this product for cookies, cakes, vegetable seasoning, and dressings or sauces are examples of this. Use for frying was about the same as use of vegetable shortening and lard in this kind of cooking. Smaller percentages used shortening compound for pastry and biscuits.

Because of the small number of users of shortening compound, the apparent differences within the age, income, and education groups were not large enough to be statistically significant. The region, race, and residence tabulations showed some differences for the various kinds of cooking.

The incidence of *deep-fat frying* with shortening compound was higher in urban than in rural areas; the percentage of homemakers using this product for *cookies* was greater in the North than in the South; its use in *cakes* was more rural than urban and more northern than southern. Its use in *biscuits*

was reported by a higher proportion in rural areas and in the South and its use for *seasoning vegetables* showed a higher percentage in the South than in the North (table 9).

Table 9.--Summary:^{1/} Percentages of homemakers reporting use of SHORTENING COMPOUND for specified kinds of cooking, by background characteristics

| Background characteristics | Among users of shortening compound, percentages who used it for -- | | | | | | | | Number of cases |
|----------------------------|--|-------------|---------------------|-------------|-------------|-------------|----------------------------------|----------------------|-----------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cookies | Cakes | Biscuits | Cooked salad dressings or sauces | Seasoning vegetables | |
| | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Number |
| United States - | 43 | 77 | 57 | 35 | 39 | 43 | 5 | 10 | 270 |
| Rural ----- | 33 | 76 | 56 | 40 | 50 | 54 | 6 | 14 | 82 |
| Urban ----- | 47 | 78 | 57 | 33 | 35 | 37 | 4 | 9 | 188 |
| White ----- | 43 | 75 | 57 | 38 | 41 | 37 | 5 | 6 | 236 |
| Nonwhite ---- | -- | -- | -- | -- | -- | -- | -- | -- | 3/34 |
| North ----- | 43 | 74 | 58 | 43 | 44 | 31 | 5 | 4 | 189 |
| Rural ----- | 31 | 70 | 54 | 52 | 60 | 37 | 8 | 5 | 90 |
| Urban ----- | 45 | 76 | 59 | 38 | 37 | 29 | 4 | 4 | 142 |
| South ----- | 44 | 83 | 54 | 21 | 33 | 68 | 3 | 23 | 207 |
| Rural ----- | 33 | 84 | 58 | 24 | 38 | 76 | 3 | 24 | 91 |
| Urban ----- | 53 | 82 | 51 | 20 | 29 | 60 | 4 | 23 | 115 |
| White ----- | 46 | 80 | 54 | 25 | 32 | 61 | 3 | 14 | 142 |
| Nonwhite ---- | 41 | 90 | 55 | 12 | 36 | 81 | 3 | 45 | 129 |

1/ For detailed tables on which this summary is based, see appendix tables 102 to 109.

2/ Percentages add to more than 100 because some users did more than 1 kind of cooking.

3/ Number of cases too small for detailed tabulations.

Users' reasons for liking shortening compound.--The texture of the final product was the reason which received the greatest proportion of mentions for all kinds of cooking with shortening compound. Taste and economy were the next greatest appeals for using this product in each kind of cooking.

A very small group of lard users said they used that product as a substitute, not by preference but as a second choice. This was also true to some extent for users of vegetable shortening but, in addition, some of them said they used it as a satisfactory substitute. That is, they would use this in place of something else and consider it a desirable replacement. This idea of satisfactory substitution, or considering shortening compound as good as another kind of shortening, was reported in fairly large proportions for each kind of cooking (table 10).

Table 10.--Summary:^{1/} Reasons users of shortening compound gave for *liking* to do specific kinds of cooking with this product

| Summary of reasons for liking | Shortening compound users who used it for -- | | | | | | | |
|--|--|--------------------|-------------------------------|---------|---------|---------------|--|-----------------------------------|
| | Deep- fat fry- ing | Pan fry- ing | Pie- crust or pastry | Cookies | Cakes | Bis- cuits | Cooked salad dress- ings or sauces | Season- ing vege- tables |
| | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| Texture of product | 22 | 20 | 52 | 31 | 49 | 48 | -- | -- |
| Taste ----- | 20 | 21 | 14 | 26 | 23 | 17 | -- | -- |
| Smoking, burning, heating ----- | 20 | 24 | -- | -- | 1 | 1 | -- | -- |
| Cost and economy - | 19 | 21 | 10 | 17 | 21 | 11 | -- | -- |
| Appearance of product ----- | 18 | 25 | 8 | 5 | 5 | 15 | -- | -- |
| Can be reused ---- | 6 | 3 | -- | -- | -- | -- | -- | -- |
| Refrigeration, convenience, freshness ----- | 6 | 5 | 6 | 9 | 7 | 4 | -- | -- |
| Health ----- | 6 | 10 | 8 | 4 | 2 | 5 | -- | -- |
| Good odor, sweet odor ----- | 5 | 9 | 2 | -- | -- | 2 | -- | -- |
| Substitute; as good as vege- table shortening- | 19 | 19 | 12 | 16 | 16 | 12 | -- | -- |
| Substitute; as good as pure lard ----- | 3 | 4 | 6 | 4 | 1 | 4 | -- | -- |
| Texture, appear- ance of fat ---- | 1 | 3 | 16 | 28 | 28 | 17 | -- | -- |
| Habit ----- | 4 | 3 | 6 | 4 | 8 | 7 | -- | -- |
| Number of cases -- | 116 | 207 | 153 | 94 | 106 | 118 | ^{2/} 12 | ^{2/} 27 |

^{1/} This summary of reasons gives the more important frames of reference in which the homemakers answered. For the detailed tabulations from which these selected figures were taken, see tables 110 to 115.

^{2/} Number of cases too small for detailed tabulations.

Because of the small number of cases, personal characteristics were tabulated only for pan frying, piecrusts, and biscuits. In the few instances in which the numbers within the groups were large enough to be tested for significance, the following differences occurred,

Pan frying:

| | <i>Region</i> | |
|---------------------------------|---------------|------------|
| Smoking, burning, heating ----- | North, 29% | South, 15% |

Piecrusts:

| | | |
|--------------------------|------------|------------|
| Texture of product ----- | North, 48% | South, 64% |
|--------------------------|------------|------------|

Biscuits:

| | | |
|----------------------------------|------------|-----------|
| Texture and appearance of fat -- | North, 25% | South, 9% |
|----------------------------------|------------|-----------|

Cakes:

| | | |
|----------------------------------|------------|------------|
| Texture and appearance of fat -- | North, 34% | South, 13% |
|----------------------------------|------------|------------|

Users' reasons for disliking shortening compound.--Homemakers who used shortening compound were not asked dislikes separately for each kind of cooking. Instead, they were asked one general question, "... what are some of the things you don't like about it for cooking?"

Only two dislikes were mentioned by as many as 5 percent of the users. Among homemakers who used shortening compound for seasoning vegetables, 5 percent complained of its tastelessness and 7 percent had other or unspecified complaints as to taste (table 116).

Nonusers of shortening compound.--A little more than 8 in 10 homemakers in the United States said they had not used any shortening compound during the year previous to interview. Only 16 percent of this group said they had ever used it.

Most of these previous users had been part of the market in the year or two before the winter of 1951 when they were interviewed.

71 percent had discontinued use in the previous 1 to 5 years
22 percent had discontinued use in the previous 5 or more years

The North reported a higher proportion who discontinued use in the more recent period, as did those who attended high school and the middle income group (tables 117, 118).

Nonusers' reasons for not using shortening compound.--The largest percentage of reasons given for nonuse of this product was expressed in terms of preference for another product rather than as a criticism of shortening compound. The next largest group of reasons showed a lack of familiarity with this fat.

25 percent use or prefer to use vegetable shortening
 9 percent use or prefer to use lard
 8 percent use or prefer to use another fat, unspecified
 2 percent use or prefer to use cooking oils
 14 percent never tried it
 11 percent never heard of it

The rural areas, the nonwhite families, the South, and the low-income families showed a higher rejection of shortening compound because of competition from lard than did the urban, white, Northern, and high-income respondents. They said they used or preferred lard, or had their own lard. The better educated and the higher income families were more likely to reject compounds because of competition from vegetable shortening (table 119).

Differences within the different groups were as follows:

| <i>Residence</i> | | | |
|--|--------------------------------|---------------------|---------------|
| Use lard, prefer lard ----- | Rural, 14% | Urban, 7% | |
| Have own lard ----- | Rural, 23 | Urban, 1 | |
| <i>Race</i> | | | |
| Use lard, prefer lard ----- | White, 8% | Nonwhite, 23% | |
| <i>Region</i> | | | |
| Never heard of it ----- | North, 13% | South, 6% | |
| Use lard, prefer lard ----- | North, 7 | South, 17 | |
| Have own lard ----- | North, 5 | South, 15 | |
| <i>Size of family</i> | | | |
| Do not do much cooking --- | 1 or 2, 13% | 3 or 4, 4% | 5 or more, 2% |
| <i>Education</i> | | | |
| Use vegetable shortening, prefer it ----- | None or grammar school, 18% | High school, 29% | College, 30% |
| <i>Income</i> | | | |
| Have own lard ----- | Low, 12% | Middle, 7% | High, 4 |
| Use lard, prefer it ----- | Low, 15 | Middle, 8 | High, 5 |
| Use vegetable shortening, prefer it -- | Low, 20 | Middle, 27 | High, 28 |

Cooking Oils

Kinds of cooking in which used.--More than half of the homemakers in the country as a whole said they had used oils for cooking at some time in the previous year. The largest percentage of use was for pan and deep-fat frying. Cakes were reported by a fairly large proportion, partly because of an active industry promotion campaign which was in progress at the time this study was in the field. Responses given by the homemakers showed that many of them had read the advertisements used in the campaign, which stressed recipes for cakes and piecrust (fig. 7).

AMONG USERS OF COOKING OILS, PERCENTAGES WHO SAID
THEY USED IT FOR DIFFERENT KINDS OF COOKING

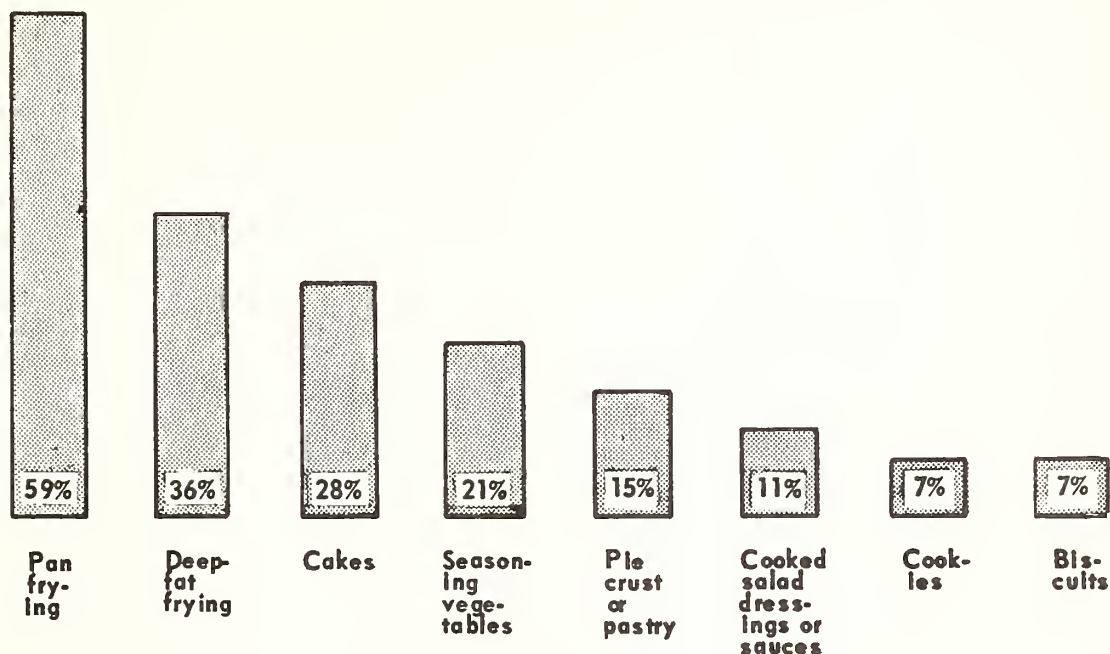


Figure 7

As with the other fats, only a few scattered differences in use of cooking oils were found among the different background groups.

Deep-fat frying with oils was higher in the South than in the North and more of a habit among larger families as compared with smaller ones. *Pan frying* had a higher incidence in urban than in rural areas, and was reported in a higher proportion among the less well educated in comparison with those who had attended high school or college. Larger proportions made *cakes* with oils in rural areas, among larger families, and in the higher educated group. *Biscuit*-making with oils was more popular in the South than in the North and *seasoning vegetables* with this product ran higher among the less well educated (table 11).

Users' reasons for liking cooking oils.--Homemakers who used oils for deep-fat frying were most pleased with the texture of the cooked product, it was not soggy or greasy. Taste was the most frequently reported appeal among those who used it for pan frying. Users of oils who made piecrust with it said one of the important appeals was the texture of the final product, or the flakiness of the crust. More than half of those who used it for cakes did so because of habit and experience, that is, they used a recipe that called for it and had had good experience with it. For cooked salad dressings or sauces and seasoning vegetables taste was the most important appeal (table 12).

Table 11.-- Summary:^{1/} Percentages of homemakers reporting use of COOKING OILS for specified kinds of cooking, by background characteristics

| Background characteristics | Among users of cooking oils, percentages who used it for -- | | | | | | | | Number of cases |
|------------------------------|---|--------------------|-------------------------------|--------------------|--------------------|---------------------|---|------------------------|-----------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry <u>2/</u> | Cook-ies <u>2/</u> | Cakes | Bis-cuits <u>2/</u> | Cooked salad dress-ings or sauces <u>2/</u> | Season-ing vege-tables | |
| | Per-cent <u>3/</u> | Per-cent <u>3/</u> | Per-cent <u>3/</u> | Per-cent <u>3/</u> | Per-cent <u>3/</u> | Per-cent <u>3/</u> | Per-cent <u>3/</u> | Per-cent <u>3/</u> | Number |
| United States ----- | 36 | 59 | 15 | 7 | 28 | 7 | 11 | 21 | 628 |
| Rural ----- | 32 | 48 | 16 | 6 | 38 | 13 | 13 | 15 | 123 |
| Urban ----- | 38 | 61 | 15 | 7 | 26 | 5 | 10 | 23 | 505 |
| White ----- | 35 | 59 | 15 | 7 | 30 | 6 | 11 | 21 | 596 |
| Nonwhite ----- | -- | -- | 14 | -- | -- | -- | -- | -- | <u>4/</u> 32 |
| North ----- | 35 | 59 | 14 | 7 | 29 | 5 | 11 | 21 | 517 |
| Rural ----- | 28 | 43 | 16 | 5 | 45 | 10 | 11 | 10 | 166 |
| Urban ----- | 36 | 63 | 14 | 7 | 25 | 4 | 10 | 23 | 434 |
| South ----- | 44 | 56 | 20 | 7 | 27 | 14 | 12 | 22 | 278 |
| Rural ----- | 41 | 60 | 15 | 7 | 24 | 19 | 17 | 26 | 99 |
| Urban ----- | 26 | 53 | 23 | 6 | 30 | 11 | 9 | 20 | 179 |
| White ----- | 28 | 52 | 20 | 7 | 30 | 13 | 13 | 20 | 240 |
| Nonwhite ----- | 26 | 75 | 17 | 5 | 9 | 18 | 4 | 35 | 76 |
| Number in family | | | | | | | | | |
| 1 or 2 ----- | 31 | 59 | -- | -- | 23 | -- | -- | 23 | 193 |
| 3 or 4 ----- | 38 | 58 | -- | -- | 29 | -- | -- | 19 | 305 |
| 5 or more ----- | 41 | 61 | -- | -- | 34 | -- | -- | 23 | 130 |
| Age group <u>5/</u> | | | | | | | | | |
| 24 years and under- | 37 | 55 | -- | -- | 20 | -- | -- | 14 | 60 |
| 25 to 29 ----- | 40 | 59 | -- | -- | 24 | -- | -- | 19 | 90 |
| 30 to 39 ----- | 41 | 60 | -- | -- | 32 | -- | -- | 18 | 179 |
| 40 to 49 ----- | 35 | 52 | -- | -- | 35 | -- | -- | 24 | 129 |
| 50 and over ----- | 30 | 65 | -- | -- | 26 | -- | -- | 26 | 157 |
| Education <u>6/</u> | | | | | | | | | |
| None or grammar school ----- | 51 | 73 | -- | -- | 19 | -- | -- | 37 | 178 |
| High school ----- | 36 | 54 | -- | -- | 31 | -- | -- | 16 | 330 |
| College ----- | 41 | 48 | -- | -- | 36 | -- | -- | 11 | 108 |
| Income group <u>7/</u> | | | | | | | | | |
| Low ----- | 29 | 61 | -- | -- | 28 | -- | -- | 20 | 134 |
| Middle ----- | 40 | 59 | -- | -- | 27 | -- | -- | 21 | 221 |
| High ----- | 36 | 58 | -- | -- | 30 | -- | -- | 21 | 247 |
| Size of place | | | | | | | | | |
| Metropolitan ----- | 36 | 64 | -- | -- | 25 | -- | -- | 24 | 435 |
| Township ----- | 47 | 43 | -- | -- | 31 | -- | -- | 14 | 70 |
| Rural ----- | 32 | 48 | -- | -- | 38 | -- | -- | 15 | 123 |

1/ For detailed tables on which this summary is based, see appendix tables 120 to 127.

2/ Only the United States, region, race, and rural-urban residence tabulations were run for these four kinds of cooking.

3/ Percentages add to more than 100 because users did more than 1 kind of cooking.

4/ Number of cases too small for detailed tabulations.

5/ Age was not ascertained for 13 respondents.

6/ Education was not ascertained for 12 respondents.

7/ Income was not ascertained for 26 respondents.

Table 12.-- Summary: ^{1/} Reasons users of cooking oil gave for *liking* to do specific kinds of cooking with this product

| Summary of reasons for liking | Cooking oil users who used it for -- | | | | | | | |
|--|--------------------------------------|------------|---------------------|------------------|---------|------------------|-----------------------------------|------------------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cook-ies | Cakes | Bis-cuits | Cooked salad dress-ings or sauces | Season-ing vege-tables |
| | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| Texture of product ----- | 36 | 27 | 47 | -- | 42 | -- | 10 | 17 |
| Smoking, burn-ing, heating- | 30 | 22 | 1 | -- | -- | -- | 2 | 1 |
| Taste ----- | 30 | 38 | 13 | -- | 8 | -- | 43 | 73 |
| Appearance of product, browning ---- | 28 | 18 | 6 | -- | 1 | -- | -- | 1 |
| Refrigeration, convenience, freshness ---- | 28 | 20 | 13 | -- | 19 | -- | 18 | 11 |
| Can be reused - | 22 | 4 | -- | -- | -- | -- | -- | 1 |
| Cost and economy ----- | 15 | 11 | -- | -- | 2 | -- | 4 | 4 |
| Health ----- | 11 | 12 | 1 | -- | 1 | -- | 6 | 13 |
| Odor--good, sweet ----- | 7 | 4 | -- | -- | 1 | -- | 4 | 1 |
| Habit and ex-perience ---- | 6 | 13 | 13 | -- | 56 | -- | 24 | 16 |
| Use as sub-stitute ----- | 4 | 6 | 3 | -- | 2 | -- | 5 | 6 |
| Texture of fat, mixes well -- | -- | -- | 28 | -- | 26 | -- | 28 | 3 |
| Number of cases | 228 | 369 | 96 | ^{2/} 44 | 178 | ^{2/} 40 | 67 | 131 |

^{1/} This summary of reasons gives the more important frames of reference in which the homemakers answered. For the detailed tabulations from which these selected figures were taken, see tables 128 to 133.

^{2/} Number of cases too small for detailed tabulations.

Most of the variation which appeared in the detailed tabulations involved regional differences.

In both kinds of frying homemakers in the South were more likely to speak of the good browned appearance of the food than those in the North. Those in the South also appreciated more than those in the North, the lack of smoking during deep-fat frying and the ease of blending oils for cakes. But a higher proportion in the North liked the taste of oil-seasoned vegetables.

Deep-fat frying:

| | <i>Region</i> | |
|------------------------------------|---------------|------------|
| Smoking, burning, heating ----- | North, 27% | South, 42% |
| Appearance of product, browning -- | North, 23 | South, 45 |

Pan frying:

| | <i>Region</i> | |
|------------------------------------|---------------|------------|
| Appearance of product, browning -- | North, 13% | South, 38% |

| | <i>Education</i> | | |
|--|--------------------------------|---------------------|-------------------|
| Refrigeration, convenience, freshness ----- | None or grammar school, 14% | High school, 21% | Col- lege, 37% |

Piecrust - (No differences by background groups)

Cookies - (Detailed tabulations were not made because of the small number of cases)

Cakes:

| | <i>Region</i> | |
|---------------------------------------|---------------|------------|
| Texture of fat--mixes, blends well -- | North, 22% | South, 44% |

Biscuits - (Detailed tabulations were not made because of the small number of cases)

Cooked salad dressings or sauces - (No differences by background group)

Seasoning vegetables:

| | <i>Region</i> | |
|-------------|---------------|------------|
| Taste ----- | North, 76% | South, 57% |

Users' reasons for disliking cooking oils.--Users of cooking oils had very few dislikes to report about their experiences with oils for the kinds of cooking included in this study. Ten percent did say they thought it was too expensive for use in general and an additional 3 percent made this complaint for each kind of frying. A few other dislikes were mentioned but none by more than 2 percent of the users (table 134).

A partial explanation for the few reasons for dislike given by the homemakers is the fact that, for a number of users, oils had a very selective use.

- 12 percent used it only for *uncooked* salad dressing
- 3 percent used it only for chiffon cakes
- 2 percent used it only for popcorn

Uncooked salad dressing and popcorn were not included in the study and, therefore, no dislies were recorded for use in this way.

Nonusers of cooking oils.--About half of the homemakers in the United States said they had used no oils for cooking in the year previous to interview. Among these nonusers, 29 percent said they had used it at some time in the past.

About half of the previous users discontinued use of oils in the late forties:

- 49 percent had discontinued use in the previous 1 to 5 years
- 43 percent had discontinued use in the previous 5 or more years

No significant differences were found in percentages of previous users when the personal characteristics of the homemakers were taken into consideration (tables 135, 136).

Nonusers' reasons for not using cooking oils.--Homemakers who did not use oils for cooking gave several reasons for nonuse. Although they expressed their objections in different ways, the principal reason was lack of experience with it. They were accustomed to using other fats and had never tried oils. They were not rejecting oil because of some attribute of the product--they had not been brought into the market as buyers.

- 19 percent preferred what they were using
- 17 percent had never tried it
- 6 percent were not familiar with use of oils
- 2 percent had never heard of it
- 2 percent were not in the habit of using it

There were some objections to the fat itself, but these were small percentages.

- 12 percent objected to the expense
- 6 percent disliked flavor
- 6 percent disliked oiliness of cooked product
- 5 percent gave health objections
- 2 percent disliked odor.

The differences in emphasis that appeared among the different background groups were:

Residence

| | | |
|-----------------------------|------------|------------|
| Prefer what using ----- | Rural, 28% | Urban, 13% |
| Do not do much cooking ---- | Rural, 7 | Urban, 14 |

Region

| | | |
|----------------------------|------------|------------|
| Prefer what using ----- | North, 15% | South, 26% |
| Do not do much cooking --- | North, 14 | South, 7 |

Income

| | | | |
|-------------------------|----------|-------------|-----------|
| Prefer what using ----- | Low, 25% | Middle, 17% | High, 12% |
|-------------------------|----------|-------------|-----------|

This presents again the picture of homemakers as nonusers because they had never been brought into the market. It is primarily rejection by default rather than because of criticism of the product. This emphasis was highest in rural areas, the South, and among low-income families.

When differences occurred because the family "doesn't do much cooking," the higher reporting of this reason was among urban and northern households (table 137).

Margarine

Kinds of cooking in which used.--A large majority of users of margarine said they used it for seasoning vegetables. At the other extreme, very small percentages said they used it for piecrusts, biscuits, or deep-fat frying. In the middle of the range, a third to almost a half reported its use in cooked salad dressings or sauces, cookies, cakes, and pan frying (fig. 8).

AMONG USERS OF MARGARINE, PERCENTAGES WHO SAID THEY USED IT FOR DIFFERENT KINDS OF COOKING

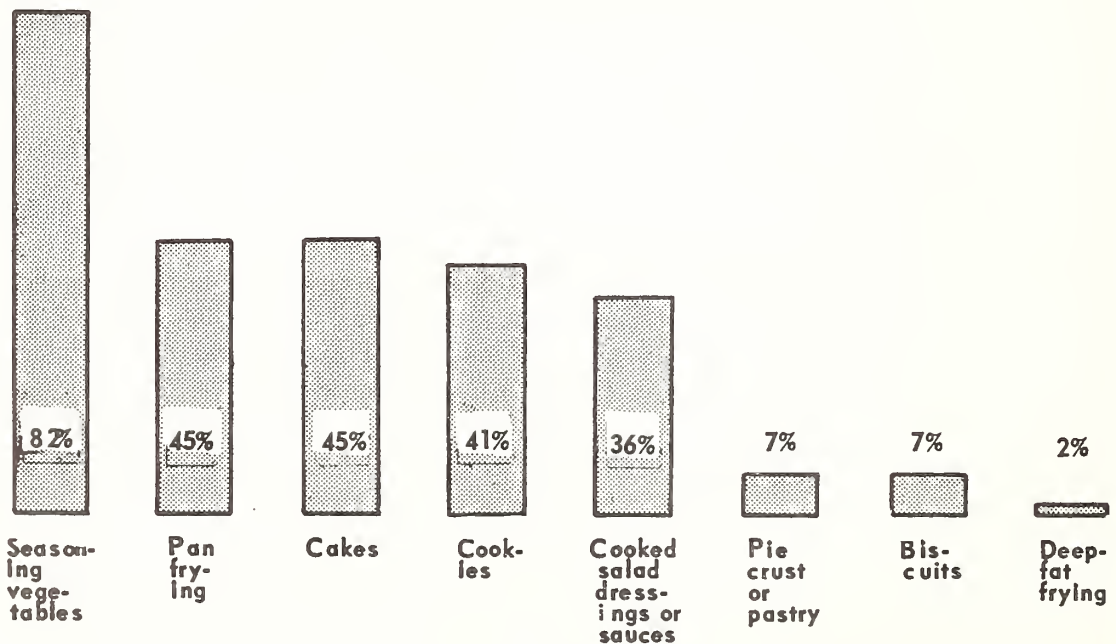


Figure 8

This pattern of use differs considerably from that of vegetable shortening, lard, and compounds. Although use of this fat for seasoning vegetables and sauces showed much higher percentages, its use for biscuits and piecrust dropped appreciably and deep-fat frying almost disappeared as a reported use.

Pan frying with margarine was more urban than rural, more northern than southern, and more popular in the upper educated group than in the lower. Baking *cookies* with this product had a higher incidence among white than among nonwhite, in the North than in the South, among larger families, women 30 to 49 years of age, the better educated, and the higher income groups. *Cake* baking appeared to be more rural than urban, more popular in the South, among nonwhites and among larger families. Larger proportions in the North than in the South said they used margarine for *cooked salad dressings or sauces*; and it was more popular among whites than among nonwhites and among the better educated and higher income families (table 13).

Users' reasons for liking margarine.--The texture of the cooked product was the appeal most frequently mentioned by users of other fats, but in the case of margarine this reason for use dropped to a minor position. In its place, at the top of the list, was the appeal of economy. The aspect of economy was most often mentioned in comparison with butter. The second highest set of percentages were those relating to the good taste of margarine. Here too the comparison with butter was often made, "It tastes good, as good as butter." An additional small group spoke of it as a good substitute for butter in rather general terms, without explaining why they considered it so.

Unlike the other fats, the rest of the reasons for liking margarine were limited in number and small in percentage reporting each (table 14).

Table 13.--Summary:^{1/} Percentages of homemakers reporting use of MARGARINE for specified kinds of cooking, by background characteristics

| Background characteristics | Among users of margarine, the percentages who used it for -- | | | | | | | | Number of cases |
|------------------------------|--|-------------|---------------------|-------------|-------------|-------------|----------------------------------|----------------------|-----------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cookies | Cakes | Biscuits | Cooked salad dressings or sauces | Seasoning vegetables | |
| | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Number |
| United States ----- | 2 | 45 | 7 | 41 | 45 | 7 | 36 | 82 | 867 |
| Rural ----- | 2 | 37 | 7 | 41 | 51 | 8 | 31 | 81 | 265 |
| Urban ----- | 2 | 49 | 7 | 41 | 42 | 7 | 38 | 82 | 602 |
| White ----- | 2 | 46 | 6 | 42 | 43 | 7 | 38 | 83 | 789 |
| Nonwhite ----- | 3 | 37 | 13 | 26 | 62 | 10 | 20 | 72 | 78 |
| North ----- | 2 | 49 | 6 | 43 | 40 | 8 | 39 | 83 | 606 |
| Rural ----- | 2 | 44 | 5 | 44 | 42 | 9 | 39 | 87 | 315 |
| Urban ----- | 2 | 51 | 7 | 43 | 40 | 8 | 39 | 81 | 449 |
| South ----- | 2 | 36 | 9 | 35 | 56 | 6 | 29 | 82 | 651 |
| Rural ----- | 1 | 26 | 11 | 36 | 65 | 7 | 20 | 73 | 269 |
| Urban ----- | 3 | 43 | 7 | 35 | 49 | 5 | 35 | 88 | 382 |
| White ----- | 2 | 36 | 8 | 38 | 53 | 4 | 32 | 86 | 521 |
| Nonwhite ----- | 2 | 37 | 12 | 27 | 67 | 11 | 17 | 68 | 260 |
| Number in family | | | | | | | | | |
| 1 or 2 ----- | 2 | 49 | 4 | 32 | 36 | 9 | 35 | 85 | 288 |
| 3 or 4 ----- | 1 | 45 | 8 | 43 | 47 | 6 | 37 | 82 | 386 |
| 5 or more ----- | 3 | 40 | 9 | 50 | 54 | 7 | 36 | 80 | 193 |
| Age group ^{3/} | | | | | | | | | |
| 24 years and under- | 5 | 45 | 6 | 31 | 40 | 5 | 32 | 85 | 82 |
| 25 to 29 ----- | 1 | 44 | 7 | 43 | 46 | 3 | 37 | 84 | 116 |
| 30 to 39 ----- | 1 | 44 | 7 | 45 | 46 | 4 | 39 | 85 | 232 |
| 40 to 49 ----- | 3 | 45 | 8 | 46 | 47 | 7 | 39 | 77 | 178 |
| 50 and over ----- | 2 | 46 | 6 | 36 | 44 | 12 | 32 | 82 | 246 |
| Education ^{4/} | | | | | | | | | |
| None or grammar school ----- | 1 | 40 | 9 | 31 | 44 | 9 | 21 | 78 | 272 |
| High school ----- | 2 | 46 | 5 | 43 | 45 | 6 | 39 | 84 | 447 |
| College ----- | 3 | 52 | 8 | 52 | 47 | 7 | 58 | 87 | 135 |
| Income group ^{5/} | | | | | | | | | |
| Low ----- | 1 | 43 | 8 | 32 | 45 | 9 | 25 | 80 | 277 |
| Middle ----- | 2 | 43 | 7 | 42 | 44 | 6 | 39 | 84 | 291 |
| High ----- | 2 | 49 | 6 | 47 | 45 | 5 | 45 | 85 | 269 |
| Size of place | | | | | | | | | |
| Metropolitan ----- | 3 | 48 | 7 | 39 | 40 | 7 | 38 | 82 | 490 |
| Township ----- | 1 | 52 | 6 | 49 | 50 | 6 | 37 | 86 | 112 |
| Rural ----- | 2 | 37 | 7 | 41 | 51 | 8 | 31 | 81 | 265 |

1/ For detailed tables on which this summary is based, see appendix tables 138 to 145.

2/ Percentages add to more than 100 because some users did more than 1 type of cooking.

3/ Age was not ascertained for 13 respondents.

4/ Education was not ascertained for 13 respondents.

5/ Income was not ascertained for 30 respondents.

Table 14.-- Summary:^{1/} Reasons users of margarine gave for *liking* to do specific kinds of cooking with this product

| Summary of reasons for liking | Margarine users who used it for -- | | | | | | | |
|-------------------------------------|------------------------------------|------------|---------------------|---------|---------|-----------|----------------------------------|----------------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cookies | Cakes | Bis-cuits | Cooked salad dressings or sauces | Seasoning vegetables |
| | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| Taste ----- | -- | 35 | 24 | 43 | 44 | 17 | 31 | 55 |
| Cost and economy-- | -- | 34 | 32 | 47 | 42 | 33 | 37 | 44 |
| Health ----- | -- | 7 | 4 | 4 | 4 | 5 | 4 | 6 |
| Texture of product ----- | -- | 3 | 5 | 11 | 11 | 5 | 3 | 3 |
| Texture and appearance of fat ----- | -- | 2 | 5 | 7 | 8 | 3 | 4 | 5 |
| Good butter substitute ----- | -- | 3 | 4 | 3 | 4 | 8 | 2 | 4 |
| Number of cases - | ^{2/} 18 | 391 | 60 | 352 | 387 | 62 | 313 | 711 |

^{1/} This summary of reasons gives the more important frames of reference in which the homemakers answered. For the detailed tabulations from which these selected figures were taken, see tables 146 to 152.

^{2/} Number of cases too small for detailed tabulations.

Separate tabulations of the reasons for liking reported by respondents with different background characteristics showed a uniformity for most of the appeals. The only reason that was reported differently from group to group was the one relating to economy. For each kind of cooking the aspect of cost and economy was discussed--with heaviest emphasis in the North. When the groups with different personal characteristics showed differences for this particular reason, they tended to be the upper educated, the urban, and the smaller families.

Deep-fat frying - (No detailed tabulations; too few cases).

Pan frying:

Region

Cost and economy -- North, 37% South, 24%

Education

Cost and economy -- None or High
 grammar school, 28% school, 33% College, 47%

Piecrust or pastry - (No significant differences)

Cookies:

Region

Cost and economy --- North, 53% South, 31%

Cakes:

Residence

Cost and economy --- Rural, 33% Urban, 47%

Region

Taste ----- North, 39% South, 53%

Cost and economy --- North, 49 South, 31

Education

Cost and economy --- None or High
grammar school, 34% school, 43% College, 53%

Biscuits - (No significant differences)

Cooked salad dressings or sauces:

Region

Cost and economy --- North, 41% South, 26%

Size of family

Taste ----- 1 or 2, 24% 3 or 4, 30% 5 and over, 40%

Age of respondent

Taste ----- 30-39, 40% 40-49, 30% 50 and over, 19%

Seasoning vegetables:

Region

Taste ----- North, 50% South, 65%

Cost and economy -- North, 49 South, 31

Size of family

Cost and economy -- 1 or 2, 48% 3 or 4, 43% 5 and over, 37%

Education

Cost and economy -- None or High
grammar school, 36% school, 45% College, 53%

Age of respondent

Taste ----- 24 or 50 and
less, 56% 25-29, 61% 30-39, 60% 40-49, 50% over, 48%

Cost and economy -- 24 or 50 and
less, 47 25-29, 36 30-39, 44 40-49, 39 over, 48

Users' reasons for disliking margarine.--For most of the fats included in this study, users tended to have very few criticisms of the fat they used. Usually only one or two of the criticisms was made by more than a few percent. Complaints volunteered by users of margarine were directed more to frying than to other kinds of cooking. Thirteen percent said that the fat burned quickly

when used for pan frying--and 5 percent said this for deep-fat frying. Four percent said that when margarine is used food sticks to the pan, 3 percent complained of "curdling" when hot, and 3 percent didn't like the way it browned in pan frying (table 153).

Nonusers of margarine.--About 4 in 10 homemakers in the United States said they had not used margarine for cooking during the year previous to interview. A third of these nonusers had used it at some time in the past.

As shown in tables 154 to 155, less than half of the nonusers had discontinued its use in the immediate past.

44 percent had discontinued use in the previous 1 to 5 years
51 percent had discontinued use in the previous 5 or more years

Nonusers' reasons for not using margarine.--Most of the reasons for not using margarine were expressed as preferences for something else and were not strong criticisms of this fat.

37 percent preferred butter
10 percent have own butter
6 percent prefer vegetable shortening
2 percent have own lard
2 percent prefer lard
4 percent prefer fat now in use (unspecified)

7 percent never tried it
5 percent don't do much cooking
4 percent not family pattern

The **critical** comments about margarine itself were as follows:

28 percent dislike taste
8 percent have health objections
6 percent dislike color, don't like to color it
4 percent dislike greasiness
4 percent dislike it because it is an artificial product
3 percent dislike its expensiveness
2 percent dislike smell

Because most of the reasons for not using it were reported by such small percentages, the differences by personal characteristics were not **significant**. The scattering of differences clustered around the general preference for butter or the fact that some homemakers made their own butter (table 156).

Residence

Prefer butter ---- Rural, 27% Urban, 40%
Have own butter -- Rural, 37 Urban, 1

Region

Have own butter -- North, 5% South, 32%

Age of respondent

Don't like taste -- 24 or less, 40% 25-29, 35% 30-39, 29% 40-49, 31% 50 and over, 21%

Income

Prefer butter ---- Low, 30% Middle, 39% High, 40%
Have own butter -- Low, 19 Middle, 9 High, 5

Butter

Kinds of cooking in which used.--Butter was used in a larger percentage of households than any other single fat. Eighty-three percent reported its use when those who used it for cooking ^{6/} were asked the kinds of cooking in which the fat was used, the largest percentage said they seasoned vegetables with it. About half said they used it for pan frying and for baking cakes. Its use in cookies and cooked dressings or sauces was reported by somewhat less than half--and very small percentages said they used it for pastry, biscuits, or deep-fat frying (fig. 9).

AMONG USERS OF BUTTER, PERCENTAGES WHO SAID THEY USED IT FOR DIFFERENT KINDS OF COOKING

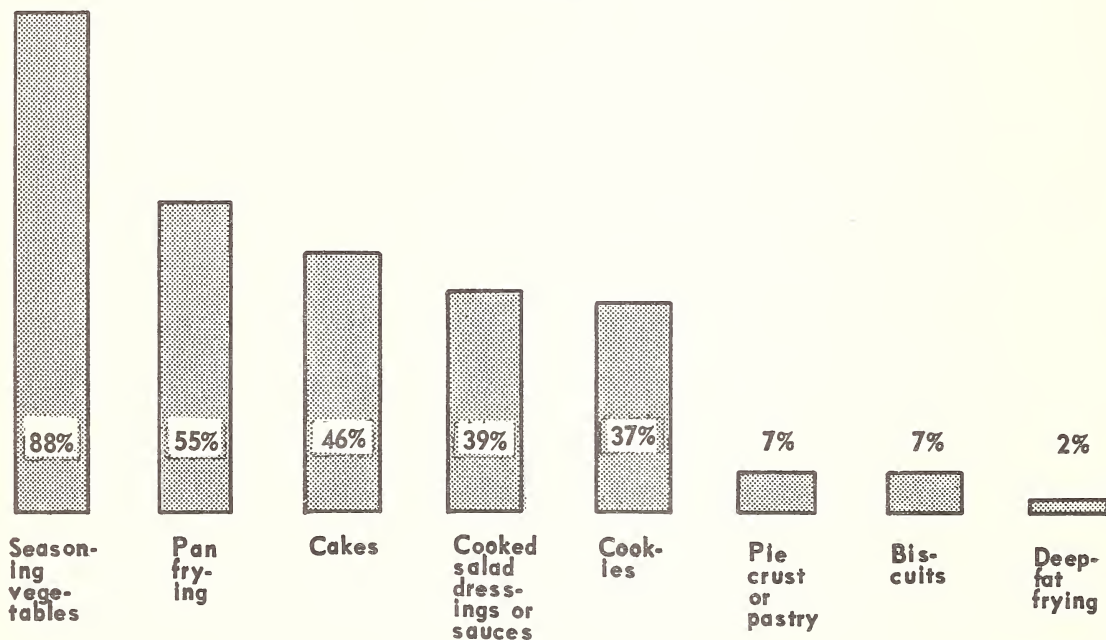


Figure 9

^{6/} Although 83 percent of the homemakers in the United States said they used butter, not all of them were asked the detailed cooking questions. Only 73 percent did the kinds of cooking included in this study. Of the 10-percent difference, 5 percent said they used butter only for spreads and 5 percent used it for other kinds of cooking.

The question on deep-fat frying was specific, "In the last year have you used any butter for DEEP-FAT FRYING, that is, frying food in enough fat to cover it completely?" As unusual as it seems, 2 percent of the butter users said they had used it for this kind of cooking.

The proportions of butter users who reported using it for each kind of cooking were similar to the percentages reported by users of margarine.

Homemakers with different personal characteristics reported very differently as to the proportions doing each kind of cooking.

Pan frying with butter was reported more frequently in urban than in rural areas, more frequently among whites than nonwhites, among smaller families, better educated families, and those in the middle and upper income groups. Baking *cookies* with butter was more rural than urban, and more of a habit among white, larger, better educated, and higher income families. In the age tabulations, women 25 to 29 and those 40 to 49 were more likely to report baking cookies with butter than the other age groups.

Making *cakes* with butter was reported more frequently among rural than among urban homemakers, among nonwhites more than among whites, in the South, and among large families and those with low incomes. *Cooked salad dressings or sauces* had a higher incidence of reported use in urban areas, among whites, in the North, among those 40 to 49 years old, among the better educated and the middle and upper income groups. *Seasoning vegetables* with butter had a slightly more uniform rate of reporting except for race, region, education, and income. Its use was more popular among whites, in the North, and among the better educated and higher income groups (table 15).

Users' reasons for liking butter.--Users of butter shifted away from the reasons for liking expressed by users of other fats. Other fats appealed to homemakers because of economy or the texture of the cooked product. For users of butter the taste of the product was more often the appeal. Texture, particularly for pastry, cookies, and cakes was reported by butter users, but in considerably lower percentages than were reported for the other fats (table 16).

Table 15.--Summary:^{1/} Percentages of homemakers reporting use of BUTTER for specified kinds of cooking, by background characteristics

| Background characteristics | Among users of butter, percentages who used it for -- | | | | | | | | Number of cases |
|------------------------------|---|-------------|---------------------|-------------|-------------|-------------|-----------------------------------|------------------------|-----------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cook-ies | Cakes | Bis-cuits | Cooked salad dress-ings or sauces | Season-ing vege-tables | |
| | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Per-cent 2/ | Number |
| United States ----- | 2 | 55 | 7 | 37 | 46 | 7 | 39 | 88 | 1,203 |
| Rural ----- | 2 | 44 | 9 | 45 | 63 | 9 | 34 | 85 | 348 |
| Urban ----- | 2 | 60 | 6 | 34 | 40 | 6 | 41 | 89 | 855 |
| White ----- | 2 | 57 | 6 | 38 | 44 | 7 | 40 | 90 | 1,104 |
| Nonwhite ----- | 4 | 30 | 11 | 26 | 76 | 7 | 18 | 70 | 99 |
| North ----- | 2 | 62 | 6 | 37 | 40 | 7 | 44 | 92 | 931 |
| Rural ----- | 3 | 57 | 5 | 48 | 54 | 9 | 48 | 97 | 395 |
| Urban ----- | 2 | 64 | 6 | 34 | 37 | 7 | 43 | 91 | 734 |
| South ----- | 1 | 32 | 11 | 37 | 68 | 8 | 21 | 76 | 679 |
| Rural ----- | 1 | 27 | 15 | 42 | 76 | 10 | 14 | 71 | 375 |
| Urban ----- | -- | 37 | 6 | 32 | 58 | 4 | 29 | 82 | 303 |
| White ----- | 1 | 34 | 11 | 41 | 65 | 8 | 23 | 79 | 518 |
| Nonwhite ----- | 1 | 23 | 11 | 26 | 77 | 7 | 14 | 64 | 321 |
| Number in family | | | | | | | | | |
| 1 or 2 ----- | 2 | 60 | 6 | 31 | 42 | 8 | 39 | 88 | 448 |
| 3 or 4 ----- | 2 | 56 | 7 | 41 | 47 | 7 | 40 | 90 | 532 |
| 5 or more ----- | -- | 44 | 7 | 41 | 53 | 7 | 34 | 84 | 223 |
| Age group ^{3/} | | | | | | | | | |
| 24 years and under- | 1 | 55 | 8 | 34 | 48 | 5 | 30 | 87 | 118 |
| 25 to 29 ----- | 1 | 54 | 3 | 43 | 45 | 4 | 38 | 91 | 143 |
| 30 to 39 ----- | 3 | 56 | 6 | 39 | 44 | 4 | 39 | 88 | 293 |
| 40 to 49 ----- | 3 | 58 | 10 | 43 | 50 | 9 | 42 | 91 | 240 |
| 50 and over ----- | 2 | 53 | 6 | 31 | 47 | 11 | 38 | 86 | 388 |
| Education ^{4/} | | | | | | | | | |
| None or grammar school ----- | 3 | 48 | 8 | 28 | 46 | 10 | 23 | 83 | 419 |
| High school ----- | 1 | 57 | 6 | 40 | 47 | 6 | 42 | 90 | 597 |
| College ----- | 2 | 65 | 7 | 50 | 48 | 6 | 66 | 95 | 168 |
| Income group ^{5/} | | | | | | | | | |
| Low ----- | 3 | 43 | 9 | 31 | 54 | 10 | 23 | 78 | 337 |
| Middle ----- | 2 | 54 | 5 | 36 | 43 | 7 | 41 | 92 | 390 |
| High ----- | 2 | 65 | 7 | 43 | 44 | 5 | 48 | 92 | 433 |
| Size of place | | | | | | | | | |
| Metropolitan ----- | 2 | 62 | 6 | 35 | 39 | 6 | 41 | 90 | 734 |
| Township ----- | -- | 47 | 4 | 26 | 44 | 6 | 36 | 89 | 121 |
| Rural ----- | 2 | 44 | 9 | 45 | 63 | 9 | 34 | 85 | 348 |

1/ For detailed tables on which this summary is based, see appendix tables 157 to 164.

2/ Percentages add to more than 100 because some users gave more than 1 type of cooking.

3/ Age was not ascertained for 21 respondents.

4/ Education was not ascertained for 19 respondents.

5/ Income was not ascertained for 43 respondents.

Table 16.--*Summary:*^{1/} Reasons users of butter gave for *liking* to do specific kinds of cooking with this product

| Summary of reasons for liking | Butter users who used it for -- | | | | | | | |
|-----------------------------------|---------------------------------|----------------|---------------------|----------------|----------------|----------------|----------------------------------|----------------------|
| | Deep-fat frying | Pan frying | Pie-crust or pastry | Cookies | Cakes | Biscuits | Cooked salad dressings or sauces | Seasoning vegetables |
| | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> |
| Taste ----- | -- | 58 | 41 | 63 | 63 | 39 | 50 | 76 |
| Health, more digestible-- | -- | 11 | 13 | 10 | 10 | 10 | 11 | 13 |
| Appearance of fat and product --- | -- | 7 | -- | 2 | 4 | 6 | 2 | 2 |
| Texture of fat and product --- | -- | 5 | 10 | 14 | 17 | 5 | 4 | 5 |
| Habit, always use it ---- | -- | 5 | 5 | 7 | 8 | 5 | 4 | 4 |
| Number of cases ----- | ^{2/} 24 | 661 | 81 | 448 | 557 | 87 | 463 | 1,058 |

1/ This summary of reasons gives the more important frames of reference in which the homemakers answered. For the detailed tabulations from which these selected figures were taken, see tables 165 to 171.

2/ Number of cases too small for detailed tabulations.

Separate reasons tabulations for homemakers with different personal characteristics showed very few differences for the various groups. For cookies and cakes rural homemakers and those in the South emphasized the texture of the product somewhat more than did other groups.

Cookies:

Region

Texture of fat and product --- North, 11% South, 25%

Cakes:

Race

Taste ----- White, 61% Nonwhite, 79%

Residence

Texture of fat and product --- Rural, 23% Urban, 13%

Region

Texture of fat and product --- North, 12% South, 27%

Education

Health ---- None or grammar school, 6% High school, 10% College, 20%

Users' reasons for disliking butter.--For each of the fats except lard, users were asked a general question as to their dislikes. That is, they were not asked what they disliked for each kind of cooking. They were asked, "What are some of the things you DON'T LIKE about butter for cooking?" This nondirective approach to bring fourth comments produced only one major criticism of butter. The high cost of butter was commented on for each kind of cooking, the percentages varying from 6 to 29. The fat itself was said to scorch quickly for pan frying by 14 percent (table 172).

Nonusers of butter.--Of the small group of homemakers in the United States who said they had not used butter in the year previous to interview, most of them said they had used it in the past. Only 20 percent were non-users. As shown in tables 173 to 174, two-thirds of this group had used it previously,

43 percent had discontinued its use in the previous 1 to 5 years
47 percent had discontinued its use in the previous 5 or more years.

Nonusers' reasons for not using butter.--The overwhelming reasons for nonuse butter reported by homemakers was the high cost of the product. Some said they preferred another product. A few criticized butter itself (table 175).

85 percent said "too expensive"
25 percent prefer margarine
4 percent prefer another fat (not margarine)
6 percent disliked flavor
6 percent complained of aging and rancidity
6 percent complained of health aspects
1 percent disliked odor
1 percent said butter is strong

With one exception, homemakers with different personal characteristics did not differ from each other in their reasons for nonuse. Those in the North were somewhat more likely to complain of the high cost of butter than those in the South.

Fat Used Most

Throughout the study homemakers were asked how they used the different fats and why they liked or disliked to use them--regardless of the quantity of each fat they used. A homemaker qualified for interview if she used a fat at some time in the year previous to interview. No further requisites were necessary to qualify as a respondent.

Although no attempt was made to measure the absolute volume used, a few questions were asked for each kind of cooking as to the relative volume of fat used.

Three-fourths or more of the homemakers who did each kind of cooking used only two or three fats.

Those who did:

Primarily reported using:

| | |
|---------------------------------------|--|
| Deep-fat frying ----- | Vegetable shortening Lard Cooking oils |
| Pan frying ----- | Vegetable shortening Lard Bacon grease |
| Piecrust or pastry ----- | Vegetable shortening Lard |
| Cookies ----- | Vegetable shortening Butter Margarine |
| Cakes ----- | Vegetable shortening Butter Margarine |
| Biscuits ----- | Vegetable shortening Lard |
| Cooked salad dressings or sauces ---- | Butter Margarine |
| Seasoning vegetables ----- | Butter Margarine Bacon grease |

Actually, for deep-fat frying, piecrust or pastry, cookies, cakes and biscuits, about half of the homemakers said they used only one fat--vegetable shortening. Also, half of the homemakers who made cooked salad dressings or sauces reported use of only one fat. In this instance it was butter.

Those who seasoned vegetables with a fat and those who did pan frying clustered less around a single fat. Only 4 in 10 of those who seasoned vegetables said they used butter and about the same proportion of those who reported pan frying said they used vegetable shortening (table 17).

As might be expected the fats reported for each kind of cooking varied considerably according to the personal characteristics of the homemakers (tables 176 to 183).

Table 17.--Replies to the question, "Which fat do you use *most* for _____?"

| Fat used most | Type of cooking | | | | | | | |
|--|-----------------------------|--------------------|-------------------------------|----------------|----------------|----------------|--|-----------------------------------|
| | Deep- fat fry- ing | Pan fry- ing | Pie- crust or pastry | Cook- ies | Cakes | Bis- cuits | Cooked salad dress- ings or sauces | Season- ing vege- tables |
| | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> |
| Vegetable shortening- | 52 | 37 | 58 | 48 | 51 | 53 | 6 | 1 |
| Lard ----- | 27 | 22 | 33 | 10 | 7 | 36 | 2 | 4 |
| Shortening compound -- | 2 | 2 | 2 | 1 | 1 | 2 | -- | -- |
| Cooking oils- | 12 | 6 | 2 | 1 | 1 | 1 | 5 | 4 |
| Margarine --- | -- | 3 | -- | 11 | 10 | 1 | 28 | 20 |
| Butter ----- | -- | 7 | 1 | 16 | 18 | 2 | 52 | 43 |
| Bacon grease- | 4 | 15 | 1 | 1 | -- | 1 | 1 | 18 |
| Vegetable shortening and some other fat-- | 3 | 5 | 3 | 9 | 8 | 3 | 2 | 1 |
| Equal amounts of 2 fats - | -- | 3 | -- | 3 | 4 | 1 | 4 | 9 |
| Total -- | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Number of cases ----- | 881 | 1,612 | 1,185 | 998 | 1,162 | 968 | 709 | 1,557 |

After the homemakers discussed which fats they used most for each kind of cooking, they were asked which fat they "used *most* for all cooking." Summarizing all kinds of cooking, more homemakers reported use of vegetable shortening than of any other fat. Lard was second in percentage of homemakers who considered it their principal cooking fat. Other fats were chosen as the principal fat by far fewer homemakers.

As the fat used *second* most, butter was the popular choice. Margarine was close to butter as a second choice and vegetable shortening and bacon grease were about tied as third most popular in this group (fig. 10).

PERCENTAGE OF HOMEMAKERS WHO SAID THEY USED A SPECIFIC FAT MOST, AND THOSE WHO SAID THEY USED IT IN SECOND PLACE

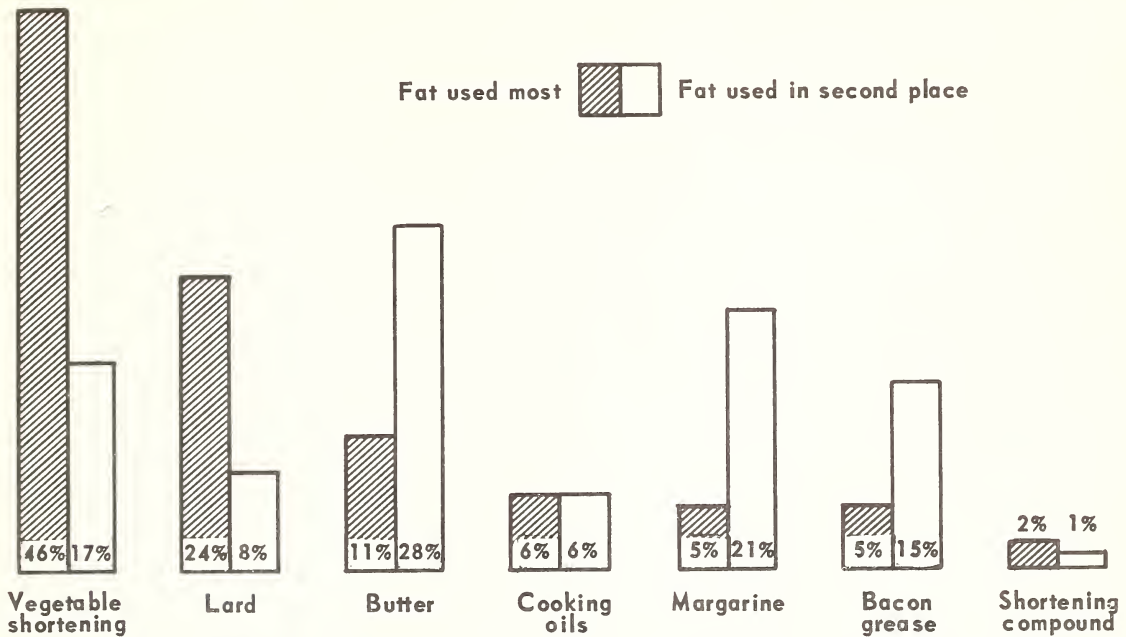


Figure 10

In the case of the fat used most, there was considerable shifting in the percentage reporting each fat according to personal characteristics of respondents. For example, although vegetable shortening was generally used most, lard was more popular than vegetable shortening in rural areas, among the non-whites, in the South, and among the less well educated and those with lower incomes. Vegetable shortening was the most popular first choice in urban areas, among whites, in the North, and among the better educated and those of higher income. For details on other fats see tables 184 - 185.

Fats on Hand, Size and Recency of Last Purchase

Fats on hand.--When the study reported here was in the planning stage there was unrest in the Orient and talk of the possibility of emergency food controls. It was this thinking that prompted the inclusion of questions to ascertain what inventory of fats and oils homemakers had on hand at one particular date--the time of interview in early 1951.

At the time this measurement was taken users of vegetable shortening, margarine, and cooking oils were most likely to have some on hand. Somewhat fewer users of butter had any inventory at that time, users of lard were even less likely to have an inventory and users of shortening compounds were still less likely to have any on hand (table 18).

The reader is reminded that homemakers were considered users if they had used a specific fat "in the last year." Therefore, those who did not have a fat on hand included frequent as well as casual users.

Table 18.--Replies to the question: "Do you have any _____ on hand at present?"

| Fat | Homemakers who used specific fat -- | | | | | |
|----------------------------|-------------------------------------|-------------------------|----------|-----------------|---------|-----------------|
| | Have some on hand | Do not have any on hand | Make own | Not ascertained | Total | Number of cases |
| | Percent | Percent | Percent | Percent | Percent | Number |
| Vegetable shortening ----- | 82 | 18 | -- | -- | 100 | 1,261 |
| Lard ----- | 57 | 17 | 25 | 1 | 100 | 808 |
| Shortening compound ----- | 36 | 61 | -- | 3 | 100 | 270 |
| Cooking oils ----- | 76 | 22 | -- | 2 | 100 | 797 |
| Margarine ----- | 78 | 20 | -- | 2 | 100 | 977 |
| Butter ----- | 70 | 17 | 11 | 2 | 100 | 1,373 |

To get a picture of the proportion of people in the United States who would be caught without supplies on hand if controls were suddenly invoked, a set of tables were computed on the basis of total U. S. rather than on those who were users as was done in table 18.

These tabulations indicate that 8 to 14 percent of the homemakers in the United States who were users of a specific fat had none on hand (table 19).

Table 19.--Summary:^{1/} Replies to the question: "Do you have any _____ on hand at present?"

| Fat | All homemakers who -- | | | | | | |
|----------------------|-----------------------|-------------------------|----------|----------------------|--------------------|---------|-----------------|
| | Use fat | | Make own | Not ascer- tained | Do not use the fat | Total | Number of cases |
| | Have some on hand | Do not have any on hand | | | | | |
| | Percent | Percent | Percent | Percent | Percent | Percent | Number |
| Vegetable shortening | 62 | 14 | -- | -- | 24 | 100 | 1,652 |
| Lard ----- | 28 | 8 | 13 | -- | 51 | 100 | 1,652 |
| Shortening compound- | 6 | 10 | -- | -- | 84 | 100 | 1,652 |
| Cooking oils ----- | 37 | 10 | -- | 1 | 52 | 100 | 1,652 |
| Margarine ----- | 46 | 12 | -- | 1 | 41 | 100 | 1,652 |
| Butter ----- | 58 | 14 | 9 | 2 | 17 | 100 | 1,652 |

^{1/} For the detailed tabulations on which this summary is based, see appendix tables 186 to 191.

The differences in inventory varied somewhat by race. Nonwhite respondents were more likely to be without one of their fats than were whites.

Other differences were small and tended to be related to larger families, the South, and homemakers in the 25 to 29 year age group who were less likely to have any on hand.

Size and recency of last purchase.--In the case of each fat the size of the last purchase showed considerable clustering around purchases of a certain size. For example,

| <i>Among users of:</i> | <i>Quantity of last purchase</i> |
|--------------------------|--|
| Vegetable shortening --- | 29 percent bought 2 pounds or less 65 percent bought 3 pounds 4 percent bought 4 pounds or more |
| Lard ----- | 66 percent bought 2 pounds or less 8 percent bought 3 pounds 23 percent bought 4 pounds or more |
| Shortening compound ---- | 24 percent bought 2 pounds or less 70 percent bought 3 pounds or more |
| Cooking oils ----- | 50 percent bought 1 pint or less 30 percent bought 1 to 2 quarts 17 percent bought over 3 quarts |
| Margarine ----- | 3 percent bought less than 1 pound 76 percent bought 1 pound 14 percent bought 2 pounds 4 percent bought 3, 4 or 5 pounds |
| Butter ----- | 8 percent bought 1/4 pound 13 percent bought 1/2 pound 65 percent bought 1 pound 12 percent bought 2, 3 or 4 pounds |

The quantities of vegetable shortening purchased which fell into the group of "4 pounds or more" were primarily 6 to 8 pounds. The largest purchases of lard clustered around 4 pounds and then around 10 pounds. Purchases of shortening compound of "3 pounds or more" were primarily in quantities of 3 pounds. Purchases of cooking oils larger than 1 gallon were seldom reported. Purchases were seldom reported of more than 3 pounds of margarine or 2 pounds of butter.

The time of last purchase varied considerably among fats. Users of butter and margarine were most likely to have had recent purchases within the previous 7 days. Users of lard also tended toward short previous intervals, but less so than users of butter and margarine. Users of vegetable shortening were most likely to have bought a week to a month previous to interview and users of shortening compound a month previous to interview. Users of cooking oils also tended toward the longer intervals. They split into equally large groups in the 2-to 4-week interval and in the more than a month interval.

Among users of:

Time of last purchase

| | | |
|-------------------------|------------|-----------------------------------|
| Vegetable shortening -- | 33 percent | bought 1 through 7 days ago |
| | 46 percent | bought over 1 week to 1 month ago |
| | 20 percent | bought over 1 month ago |
| Lard ----- | 41 percent | bought 1 through 7 days ago |
| | 31 percent | bought over 1 week to 1 month ago |
| | 22 percent | bought over 1 month ago |
| Shortening compound --- | 14 percent | bought 1 through 7 days ago |
| | 31 percent | bought over 1 week to 1 month ago |
| | 51 percent | bought over 1 month ago |
| Cooking oils ----- | 18 percent | bought 1 through 7 days ago |
| | 41 percent | bought over 1 week to 1 month ago |
| | 40 percent | bought over 1 month ago |
| Margarine ----- | 67 percent | bought 1 through 7 days ago |
| | 23 percent | bought over 1 week to 1 month ago |
| | 8 percent | bought over 1 month ago |
| Butter ----- | 74 percent | bought 1 through 7 days ago |
| | 18 percent | bought over 1 week to 1 month ago |
| | 5 percent | bought over 1 month ago |

Although there were differences among fats as to size and recency of last purchase there was very little difference in recency of purchase for different quantities of any one fat. That is, on the whole, homemakers who bought large quantities and those who bought small quantities of the same fat appeared to buy at about the same intervals of time.

Exceptions to this occurred among users of cooking oils and margarine. Homemakers who bought oil in quantities of 1 to 2 quarts differed from those who bought either larger or smaller quantities. They were more likely to buy during the period covered by "more than a week through a month" and they were considerably less likely to buy at intervals greater than a month. Homemakers who bought smaller quantities of margarine were somewhat more likely to buy in shorter time intervals than were those who bought larger quantities at a time (tables 192 to 197).

Because homemakers who buy more of a fat at a time tend to buy as frequently as those who buy in smaller quantities, it would seem that people make larger purchases because they use more of the fat--not because they wish to reduce the frequency of shopping for the product.

Packaging and Containers

Vegetable shortening.--Most users of vegetable shortening said they usually bought 3-pound containers. The next most popular size was the 1-pound container. Very few bought in larger than 3-pound units.

Size of container usually bought by users of vegetable shortening:

| <i>Size usually bought</i> | <i>Percentage buying Percent</i> |
|---|--------------------------------------|
| 1 pound ----- | 26 |
| 2 ----- | 1 |
| 3 ----- | 70 |
| 4 ----- | 1 |
| 5 or more ----- | <u>1/</u> |
| Two or more sizes or not ascertained ----- | 2 |
| Total ----- | <u>100</u> |
| Number of cases ----- | 1,261 |

1/ Less than 1 percent.

More urban than rural users said they bought smaller containers, while more rural than urban homemakers said they bought the larger containers. Although the 3-pound package was more frequently reported by all groups regardless of personal characteristics, a higher proportion of those in smaller families and with lower incomes bought the 1-pound package than did those with larger families and more income (table 198).

On the whole, homemakers were satisfied with the size of container available to them. Only 1 in 10 said they preferred a different size (table 20).

Table 20.--Reaction to size of container by users of vegetable shortening who usually bought containers of a certain size

| Reaction | Total | Size usually bought | |
|---------------------------------------|----------------|---------------------|---------------------|
| | | 1 or 2 pounds | 3 or more pounds |
| | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> |
| Liked present size container ----- | 91 | 88 | 92 |
| Disliked present size container ----- | 9 | 11 | 8 |
| Preferred a smaller size ----- | 2 | 4 | 2 |
| Preferred a larger size ----- | 7 | 7 | 6 |
| Not ascertained ----- | -- | 1 | -- |
| Total ----- | 100 | 100 | 100 |
| Number of cases ----- | 1,261 | 343 | 918 |

Of the 9 percent who were dissatisfied with the size of the container they usually bought, about a third said they preferred 1-to 3-pound containers and a third preferred a 4-or 5-pound size. Rather small groups said they would like sizes either smaller than a pound or larger than 5 pounds.

Size of container preferred by users of vegetable shortening who disliked the size usually bought:

| <i>Size preferred</i> | <i>Percentage of users Percent</i> |
|-----------------------|--|
| 1/2 pound ----- | 6 |
| 1 ----- | 10 |
| 2 ----- | 9 |
| 3 ----- | 15 |
| 4 ----- | 5 |
| 5 ----- | 28 |
| 6 ----- | 7 |
| 8 or more ----- | 6 |
| Not ascertained ----- | 14 |
| Total ----- | 100 |
| | <hr/> |
| Number of cases ----- | 111 |

Most users of vegetable shortening said they bought this product packaged in metal containers.

96 percent bought in metal containers
3 percent bought in paper containers
1 percent container type not ascertained

100 percent total users of vegetable shortening

Metal containers were bought by more than 90 percent of the homemakers, regardless of personal characteristics, with one exception. In the South a higher proportion said they bought vegetable shortening in paper containers (table 199).

A small group--about 1 in 10--had complaints about containers.

12 percent had some dislikes
87 percent had no dislikes
1 percent dislikes not ascertained

100 percent total users of vegetable shortening

Most complaints centered around the problem of opening the container and the lack of fit of the lid after opening. The tabulations of reasons for dislike was made only for round metal containers because other kinds of containers were bought by so few homemakers.

Reasons users of vegetable shortening gave for disliking round metal containers:

| | Percent ^{1/} |
|---|-----------------------|
| Lids don't fit well after opening ----- | 54 |
| Keys are difficult to use ----- | 15 |
| Prefer screw top or glass container with screw top ----- | 9 |
| Sharp edges ----- | 7 |
| Prefer square shape ----- | 4 |
| Hard to open ----- | 4 |
| Prefer glass for reuse later ----- | 3 |
| Difficult to measure ----- | 2 |
| Prefer glass ----- | 2 |
| Lid complaint ----- | 1 |
| Messy to handle ----- | 1 |
| Miscellaneous ----- | 29 |
| Not ascertained ----- | 1 |
| | <hr/> |
| Number of cases ----- | 141 |

^{1/} Percentages add to more than 100 because some users gave more than 1 reason for disliking container.

Packaged lard.--At the time the study was conducted most users of lard were buying it packaged. About a fourth were using homemade lard and only 4 percent said they bought this product in bulk.

Rural respondents split almost 50 - 50 in use of packaged and homemade lard. The urban population reported almost twice the proportion using packaged lard as did those in rural areas--but even here 1 in 10 said they used a homemade product.

Although both whites and nonwhites tended toward greater use of the pre-packaged than of the homemade product, whites were more likely to report using homemade lard than were nonwhites and a higher proportion of nonwhites reported using the packaged product. Breakdowns of both the North and the South showed purchases predominantly in packaged form. However, there were differences in emphasis. The North reported a higher proportion of packaged purchases than did the South and the South reported more homemade lard than did the North (table 21).

Differences by size of family, age and education of homemaker, and family income were not significant.

Table 21.--Users of lard and type of lard purchased or used, or both

| Background characteristics | Type purchased or used | | | | | | | | Number of cases |
|----------------------------|------------------------|-----------------|---------------------|------------------------|--|--------------------------------------|-------------------------------|-----------------|-----------------|
| | Buys packaged lard | Buys bulk lard | Uses home-made lard | Buys packaged and bulk | Buys and/or uses packaged and homemade | Buys, uses packaged, bulk, home-made | Buys, uses bulk and home-made | Total | |
| | <i>Per-cent</i> | <i>Per-cent</i> | <i>Per-cent</i> | <i>Per-cent</i> | <i>Per-cent</i> | <i>Per-cent</i> | <i>Per-cent</i> | <i>Per-cent</i> | <i>Number</i> |
| United States | 68 | 4 | 26 | 1 | 1 | -- | -- | 100 | 808 |
| Rural ----- | 44 | 4 | 48 | 1 | 2 | -- | 1 | 100 | 346 |
| Urban ----- | 85 | 4 | 9 | 1 | 1 | -- | -- | 100 | 462 |
| White ----- | 65 | 4 | 29 | 1 | 1 | -- | -- | 100 | 700 |
| Nonwhite --- | 84 | 4 | 10 | 1 | 1 | -- | -- | 100 | 108 |
| North ----- | 71 | 4 | 23 | 1 | 1 | -- | -- | 100 | 555 |
| Rural ----- | 40 | 7 | 48 | 1 | 2 | 1 | 1 | 100 | 379 |
| Urban ----- | 86 | 3 | 9 | 1 | 1 | -- | -- | 100 | 366 |
| South ----- | 60 | 3 | 34 | 1 | 2 | -- | -- | 100 | 631 |
| Rural ----- | 48 | 2 | 47 | 1 | 2 | -- | -- | 100 | 391 |
| Urban ----- | 80 | 6 | 12 | 1 | 1 | -- | -- | 100 | 241 |
| White ----- | 52 | 3 | 42 | 1 | 2 | -- | -- | 100 | 448 |
| Nonwhite --- | 81 | 4 | 13 | 1 | 1 | -- | -- | 100 | 366 |

Users of packaged lard were more likely to buy smaller packages than were users of vegetable shortening. Among users of packaged lard the largest proportion bought 1-pound packages.

Size of containers usually bought by users of packaged lard:

| <i>Size usually bought</i> | <i>Percentage buying Percent</i> |
|----------------------------|--------------------------------------|
| 1 pound ----- | 63 |
| 2 ----- | 9 |
| 3 ----- | 6 |
| 4 ----- | 14 |
| 5 ----- | 1 |
| 8 or more ----- | 6 |
| 2 or more sizes ----- | 1 |
| Total ----- | 100 |
| Number of cases ----- | 561 |

As in the case of vegetable shortening, respondents with different personal characteristics showed differences as to the size of container usually bought.

Although for most groups the largest proportion reported 1-pound packages, homemakers who were urban and those who were white were more likely to report 1-pound packages than were homemakers who were rural or nonwhites. Differences showed up again in the regional tabulations. The North tended toward the smaller package—the South toward the larger packages. Those in smaller families and those with higher incomes also reported higher percentages using the 1-pound package (table 200).

Most buyers of packaged lard were satisfied with the size of container they usually bought. Those who were dissatisfied with the size tended to prefer a larger size (table 22).

Table 22.--Reaction to size of container by users of lard who usually bought containers of a certain size

| Reaction | Total | Size usually bought | | | |
|---------------------------------------|---------|---------------------|---------------|------------------|--|
| | | 1 pound | 2 or 3 pounds | 4 or more pounds | |
| | Percent | Percent | Percent | Percent | |
| Liked present size container ----- | 90 | 89 | 95 | 89 | |
| Disliked present size container ----- | 9 | 11 | 5 | 8 | |
| Preferred a smaller size ----- | 1 | 3 | -- | 1 | |
| Preferred a larger size ----- | 8 | 8 | 5 | 7 | |
| Not ascertained ----- | 1 | -- | -- | 3 | |
| Total ----- | 100 | 100 | 100 | 100 | |
| Number of cases ----- | 561 | 352 | 85 | 114 | |

Most of this group of users said they usually bought lard in cardboard containers. Metal was reported by a small group and miscellaneous kinds of packages by 2 percent.

88 percent bought in cardboard containers

10 percent bought in metal containers

2 percent bought in miscellaneous types of containers

552 cases

Although cardboard packages were bought by a large majority, regardless of personal characteristics, the different groups varied as to acceptance of this package. Cardboard was more popular in urban than in rural areas, in the North more than in the South, and among those of high income as compared with middle and low incomes (table 201).

Among all buyers, regardless of type of package, about 3 in 10 reported complaints as to packages. Those who usually bought cardboard were more likely to complain than those who usually bought metal (table 23).

Table 23.--Reaction to type of container by users of lard who usually bought certain types of packages

| Reaction to type | Total | Type of container usually bought | | |
|--------------------------------|---------|----------------------------------|-----------|--------------------|
| | | Metal | Cardboard | Mis- cellaneous |
| | Percent | Percent | Percent | Percent |
| Had some dislikes ----- | 29 | 12 | 31 | -- |
| Had no dislikes ----- | 71 | 85 | 69 | -- |
| Dislikes not ascertained ----- | -- | 3 | -- | -- |
| Total ----- | 100 | 100 | 100 | -- |
| Number of cases ----- | 552 | 57 | 487 | <u>1/</u> 8 |

1/ Number of cases too small for detailed tabulations.

Because of the small number of respondents who said they bought lard in round metal containers or round cardboard containers, reasons for dislike were tabulated only for those who said they bought in rectangular cardboard containers. About 7 in 10 of these people said the cardboard boxes were messy to handle. Another sizable group spoke of dislikes in terms of preference for other containers, "prefer metal" or "prefer glass."

Reasons users of packaged lard gave for disliking rectangular cardboard containers:

| | Percent <u>1/</u> |
|--|-------------------|
| Messy to handle ----- | 71 |
| Prefer metal bucket ----- | 38 |
| Lids don't fit well after opening (paper reference) -- | 9 |
| Hard to open and get into (paper reference) ----- | 7 |
| Gets rancid faster in paper ----- | 5 |
| Prefer glass ----- | 3 |
| Dislike paper carton (aspect unspecified) ----- | 3 |
| Difficult to measure ----- | 2 |
| Prefer glass and/or metal for reuse later ----- | 1 |
| Not ascertained ----- | 6 |
| Number of cases ----- | <u>148</u> |

1/ Percentages add to more than 100 because some users gave more than 1 reason for disliking container.

Bulk lard.--Homemakers who bought bulk lard were asked, "Does the store where you usually buy bulk lard also sell it in packages?" Very few homemakers had bought lard in bulk--but most of those who did, said that packaged lard was available in their stores. They said they bought it in bulk because it was cheaper that way.

Cooking oils.--Most users of cooking oils--77 percent--bought in pint or quart sizes. A small group bought gallon containers and very few said they used other sizes.

Size of container usually bought by users of cooking oils:

| <i>Size usually bought</i> | <i>Percentage buying Percent</i> |
|----------------------------|--------------------------------------|
| Less than 1/2 pint ----- | 2 |
| 1/2 pint ----- | 2 |
| 1 pint ----- | 45 |
| 1 quart ----- | 32 |
| 1/2 gallon ----- | 1 |
| 1 gallon ----- | 14 |
| 2 or more sizes ----- | 2 |
| Not ascertained ----- | 2 |
| Total ----- | 100 |
| | <hr/> |
| Number of cases ----- | 797 |

The few differences in size usually bought were scattered within the groups of different personal characteristics. A higher proportion of rural than of urban homemakers said they used 1-pint sizes. A higher proportion of those with high-school education bought pint sizes than of those with less education and larger proportions of those with least education said they used the gallon size than did those who were better educated (table 202).

As in the case of vegetable shortening and lard, users of cooking oils tended to be satisfied with the size of container they usually bought. This was true regardless of whether the size was 1 pint or less, 1 quart, or a half gallon or more (table 24).

Of the homemakers who said they disliked the size of container they usually bought, about a fourth expressed a preference for the half-pint size. The next preferred size was the quart size--19 percent preferred this. Eighteen percent preferred a half gallon and 12 percent preferred a pint. Other sizes were less preferred.

Table 24.--Reaction to size of container usually bought by users of cooking oils

| Reaction to size | Percentage buying | |
|--|-------------------|-----|
| | <i>Percent</i> | |
| Liked present size of container ----- | | 91 |
| Disliked present size of container ----- | | 7 |
| Preferred a smaller size ----- | 3 | |
| Preferred a larger size ----- | 4 | |
| Not ascertained ----- | | 2 |
| Total ----- | | 100 |
| Number of cases ----- | | 797 |

Two in three users of cooking oils said they bought this product in glass containers. The glass containers were predominately round and the metal was rectangular in shape.

69 percent bought in glass containers
 29 percent bought in metal containers
 1 percent bought two or more types of containers
 1 percent container type not ascertained

100 percent total users of cooking oils

Although glass was the predominant selection regardless of background characteristics, emphasis on this preference did shift from group to group. Rural areas reported higher proportions using glass than did urban areas. Those in the middle age group and those with more education were more likely to buy glass than the young, old, or less well educated homemakers. In the South the most popular choice by far was glass (table 203).

Among users of cooking oils as a group, only 1 in 10 said they had complaints about containers. Those who usually bought metal containers were more likely to complain than those who usually bought their oils in glass (table 25).

Complaints reported by users of metal and by users of glass both centered around pouring problems. Well over half of those who complained about metal said this as did almost half of those who complained about glass. Additional complaints concerned the difficulty of opening the metal containers. Reports of glass breakage and preference for reuse of the container or the difficulty of returning excess oil to containers were small in proportion.

Table 25.--Reaction to type of container by users of cooking oils who usually bought certain types of containers

| Reaction to type of container | Total | Type usually bought | |
|------------------------------------|----------------|---------------------|----------------|
| | | Glass | Metal |
| | <i>Percent</i> | <i>Percent</i> | <i>Percent</i> |
| Had some dislikes ----- | 11 | 8 | 19 |
| Did not have dislikes ----- | 88 | 92 | 81 |
| Dislikes not ascertained ----- | 1 | -- | -- |
| Total ----- | 100 | 100 | 100 |
| Number of cases $\frac{1}{}$ ----- | 775 | 547 | 228 |

$\frac{1}{}$ Type of container not ascertained for 22 respondents.

Packaged butter.--This cross-section sample of homemakers in the United States indicated that 81 percent of them bought butter. Only 3 percent said they bought bulk butter and 14 percent said they used homemade butter.

Differences that occurred among groups with different personal characteristics, usually came down to a shift from packaged to homemade and vice versa. The predominant type was always packaged--but while the urban, northern, small families, upper educated, and higher income people reported higher percentages using packaged butter than other groups--the rural, southern, large family, less well educated, and lower income groups reported higher percentages using homemade butter than others (table 26).

Bulk butter.--Of the 3 percent of the users of butter who bought it in bulk, most said that the store where they usually shopped also carried packaged butter. Many of these homemakers thought that bulk butter was fresher and tasted better. Some said it was cheaper when bought in that way.

Those few who bought it in bulk and whose stores did not sell packages were not very much interested in having packages made available to them.

Table 26.--Users of butter and type of butter purchased, used, or both

| Background characteristics | Type purchased or used | | | | | | Number of cases |
|----------------------------|------------------------|------------------|-----------------------|--|-----------------|---------|-----------------|
| | Buys packaged butter | Buys bulk butter | Uses home-made butter | Buys, uses some combination of preceding three | Not ascertained | Total | |
| | Percent | Percent | Percent | Percent | Percent | Percent | Number |
| United States ----- | 81 | 3 | 14 | 1 | 1 | 100 | 1,373 |
| Rural ----- | 58 | 1 | 40 | 1 | -- | 100 | 396 |
| Urban ----- | 91 | 4 | 3 | 1 | 1 | 100 | 977 |
| White ----- | 82 | 3 | 14 | 1 | -- | 100 | 1,256 |
| Nonwhite ----- | 77 | 4 | 17 | 2 | -- | 100 | 117 |
| North ----- | 89 | 3 | 6 | 1 | 1 | 100 | 1,043 |
| Rural ----- | 73 | 1 | 24 | 2 | -- | 100 | 441 |
| Urban ----- | 93 | 4 | 1 | 1 | 1 | 100 | 823 |
| South ----- | 58 | 2 | 40 | -- | -- | 100 | 825 |
| Rural ----- | 38 | 1 | 60 | 1 | -- | 100 | 439 |
| Urban ----- | 80 | 2 | 17 | 1 | -- | 100 | 386 |
| White ----- | 54 | 1 | 44 | 1 | -- | 100 | 635 |
| Nonwhite ----- | 68 | 4 | 27 | 1 | -- | 100 | 379 |
| Number in family | | | | | | | |
| 1 or 2 ----- | 83 | 5 | 11 | 1 | -- | 100 | 509 |
| 3 or 4 ----- | 82 | 2 | 14 | 1 | 1 | 100 | 603 |
| 5 or more ----- | 75 | 4 | 19 | 1 | 1 | 100 | 261 |
| Age group ^{1/} | | | | | | | |
| 24 years and under --- | 85 | 2 | 12 | 1 | -- | 100 | 133 |
| 25 to 29 ----- | 85 | -- | 14 | -- | 1 | 100 | 162 |
| 30 to 39 ----- | 82 | 4 | 13 | -- | 1 | 100 | 337 |
| 40 to 49 ----- | 81 | 2 | 16 | 1 | -- | 100 | 268 |
| 50 and over ----- | 78 | 4 | 15 | 2 | 1 | 100 | 450 |
| Education ^{2/} | | | | | | | |
| None or grammar school | 75 | 4 | 19 | 1 | 1 | 100 | 491 |
| High school ----- | 84 | 2 | 13 | 1 | -- | 100 | 675 |
| College ----- | 91 | 1 | 7 | 1 | -- | 100 | 187 |
| Income group ^{3/} | | | | | | | |
| Low ----- | 70 | 3 | 25 | 1 | 1 | 100 | 407 |
| Middle ----- | 83 | 3 | 12 | 1 | 1 | 100 | 449 |
| High ----- | 88 | 4 | 7 | 1 | -- | 100 | 469 |
| Size of place | | | | | | | |
| Metropolitan ----- | 92 | 4 | 2 | 1 | 1 | 100 | 840 |
| Township ----- | 87 | 1 | 12 | -- | -- | 100 | 137 |
| Rural ----- | 58 | 1 | 40 | 1 | -- | 100 | 396 |

^{1/} Age was not ascertained for 23 respondents.

^{2/} Education was not ascertained for 20 respondents.

^{3/} Income was not ascertained for 48 respondents.

Brand Preference and Loyalty

Each person who said she used a fat was asked whether she usually looked for a certain brand name when she went to buy the particular fat. Answers to this question indicated that more users of vegetable shortening had a brand preference than users of other fats. Cooking oils were next most closely identified with brand, while users of margarine and users of shortening compound were about equally interested in brand. Butter dropped somewhat below this pair and users of packaged lard were least interested in brand when they went to buy.

But the fact that homemakers expressed a brand preference was no proof that they had any degree of loyalty to that brand. For example, even though 82 percent of the users of vegetable shortening said they had a preference as to brand, only 36 percent of this group said they would make an effort to find it if it were not immediately available. That is, 22 percent said they would try to find it in another store and an additional 14 percent said they would wait until their "usual" store had it in stock.

Cooking oils, for which 75 percent of the users said they had a preference, had the greatest degree of brand loyalty. Almost half of those with a preference said they would make an effort to get the brand they preferred.

Users of packaged lard, who expressed the least brand preference, indicated about the same amount of loyalty to brand as did those who had brand preferences for shortening compound, vegetable shortening, and margarine (fig. 11).

Although there were very few significant differences in loyalty to brands among homemakers of different personal characteristics, there was a regional difference. Those in the South appeared to be somewhat more concerned about obtaining specific brands of vegetable shortening, packaged lard, shortening compound, cooking oils, and butter. Southern homemakers were more likely to say they would look in another store if their favorite brand were not immediately available (tables 204, 205).

Refrigeration

Users of vegetable shortening, lard, shortening compound, and cooking oils were asked whether they usually kept the product at room temperature or in a cooled place. Details about users of bulk lard are not published because so few respondents said they used it.

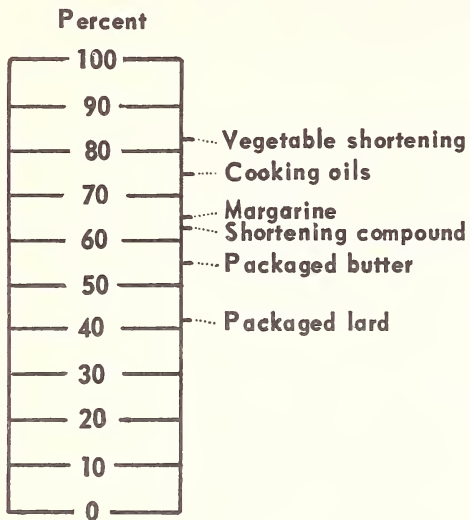
Only 3 in 10 users of packaged lard kept it at room temperature. Other users kept it cooled or in a refrigerator. Users of the other fats tended to store them at room temperature. Eight in 10 users of vegetable shortening, 7 in 10 users of shortening compound, and 8 in 10 users of cooking oils did this.

Although a third or more of the homemakers who refrigerated their fats said they had no actual preference as to need for refrigeration, many said they would like to be able to buy fats that could be kept at room temperature without going bad.

More than half of those who keep lard cool would like to be able to leave it at room temperature. More than 40 percent of the users of other fats who keep it cool say they would like to be relieve of this need (fig 12, tables 206, 207).

PERCENTAGE OF USERS WHO SAID THEY HAD BRAND PREFERENCE AND BRAND LOYALTY FOR SPECIFIC FATS

BRAND PREFERENCE among users



BRAND LOYALTY among those who have a preference

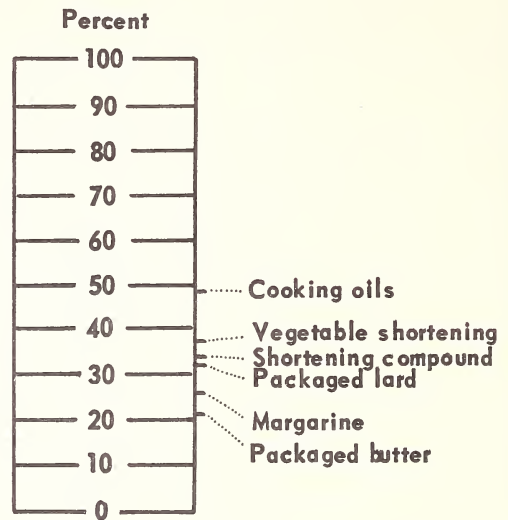
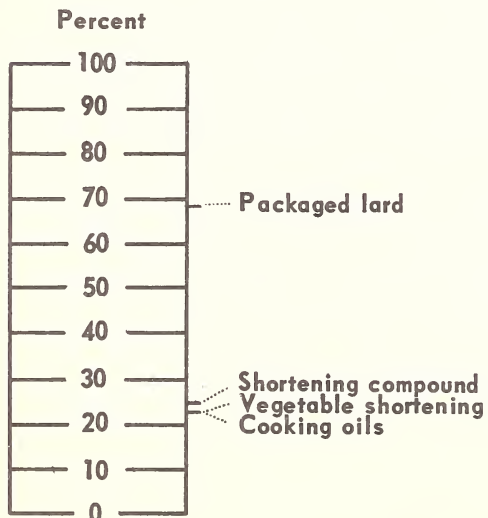


Figure 11

PERCENTAGE OF USERS WHO SAID THEY KEPT SPECIFIC FATS IN A COOL PLACE AND THOSE WHO WOULD LIKE TO LEAVE IT AT ROOM TEMPERATURE

USERS who keep fat in cool place



USERS who keep fat cool but who would like to leave it at room temperature

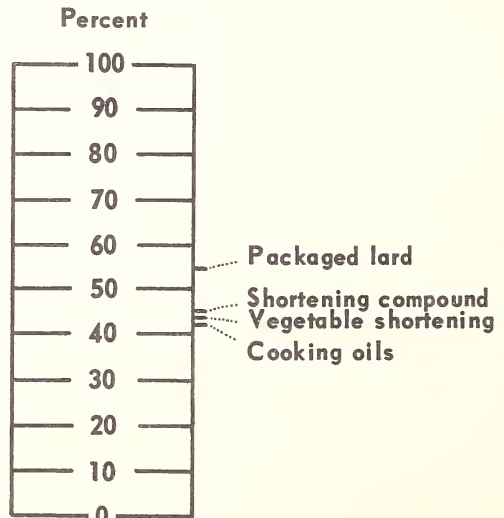


Figure 12

Rendering of Lard

Among respondents who lived in towns of less than 2,500 population or in the open country, 32 percent said they had rendered lard in the year previous to interview. A higher proportion of home rendering was reported in the South, and among large families, the less well educated, and those of lower income.

Some time before this study was undertaken an effort had been made to encourage people who rendered their own lard to improve their product by adding certain ingredients.

At the time the study was in the field, only 1 in 4 of those who rendered lard at home added anything to it (table 208). Among those who used additives, less than half used ingredients which improved flavor, melting point, smoke point, or keeping qualities.

Homemakers who added ingredients reported as follows:

| | |
|-------------|---------------------------------|
| 27 percent | added water |
| 27 percent | added salt |
| 26 percent | added soda, soda ash |
| 7 percent | added salt and soda |
| 4 percent | added potatoes |
| 4 percent | added lard flakes |
| 3 percent | added vegetable shortening |
| 2 percent | added miscellaneous ingredients |
| <hr/> | |
| 100 percent | total |
| 184 | number who did home rendering |

Only 5 percent of the respondents in these small towns and in the open country said they had had lard rendered at a locker plant. None of these respondents had the plant add anything to the lard.

A few of the people in these areas did home rendering and had some rendered at a plant. Most, however, only rendered at home.

| | |
|------------|---------------------------------|
| 30 percent | did home rendering only |
| 3 percent | did locker-plant rendering only |
| 2 percent | did home and locker rendering |

571 number of people living in towns under 2,500 and in open country.

Among those who rendered lard or who had it rendered, about 6 in 10 bought no additional lard. Four in 10 supplemented their home supply by buying some.

Two-thirds of those who bought additional lard said that their homemade product was what they used most; a third said the lard they bought was what they used most.

63 percent used home-rendered lard most
32 percent used purchased lard most
3 percent used both equally
2 percent use not ascertained

100 percent total

76 number of people who had a home or locker source who also
bought some lard.

The detailed appendix tables numbered 27 through 208, referred to in the text, and the questionnaire have been published in a separate Supplement to this report, Marketing Research Report No. 67, and may be obtained upon request to the Information Division, Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C.

